AMERICAN FARMER.

VOL. XII. BALTIMORE, JANUARY, 1857. No. 7.

CULTIVATION OF TOBACCO IN KENTUCKY.

We received, recently, an application from the Bavarian Consul General, resident in Philadelphia, for copies of the several essays on the cultivation of Tobacco in Maryland, published in the American Farmer, and we had the pleasure of forwarding those of Messrs. W. W. W. Bowie, O. N. Bryan, W. J. Blackistone, and R. N. Milburn.

We observe that a similar application has been made by the same gentleman, for information upon the same subject, from our cotemporaries at the West, to supply which the following has been elicited by the Editor of the Louisville (Ky.) Commercial Review, "from one of the most accomplished planters of South Western Kentucky."—We transfer the letter to our pages, not doubting, that tho' the planters of Maryland and Virginia, are as well posted in their business as those of any other State, there will be found some useful hints upon which they may build.

MESSRS. EDITORS:

I avail myself of the first opportunity to comply with your request of the 5th instant, to prepare an article on the culture and management of Tobacco, as practiced in the tobacco districts of our country. I shall endeavor to be as plain and practical in my remarks as I can, to secure as far as possible the object I suppose the Bavarian Consul has in view in obtaining the information. I shall not attempt a general or even a partial history of its introduction into the United States, but proceed at once to treat of the general and best method of its culture and preparation for market, with such incidental remarks as may be necessary more fully to elucidate that particular branch of the subject, regretting, however, that the subject had not been committed to abler hands. The successful cultivation of the tobacco plant depends much upon the energy and care of the planter. Perhaps there is no crop which requires such unremitting care and attention, as a small neglect at certain periods of its progress frequently causes serious loss and damage, and greatly lessens its value in market. A matter of the first importance in its cultivation is to provide a sufficiency of young plants to set the crop, and in order to do this the planter must sow a bountiful supply of seed, as the young plants are subject to many casualties before a "good stand" is had. In this latitude the time of seeding extends from the first of January to the first of April, and in ordinary seasons a bountiful supply can be obtained by sowing at any time during the period alluded to. It is generally best, however, to sow as soon as the winter affords such a spell of weather as will allow a good preparation of the soil. New or forest land is preferable for plant beds, and they are prepared by first burning the surface with brush or wood sufficiently to destroy the seed of any vegetation in the land, as grass or weeds. Beds prepared in the early part of the season require more burning than those at a later period. There is but little danger of burning too hard, however, at any time, as the plants generally succeed best upon the beds most thoroughly burned. After the beds are thus burnt and cooled off, they are dug up with a common sprouting hoe to a depth sufficient to afford the plant a loose soil in which to extend its roots. Care should be taken to leave the surface soil as much on top in the preparation of the bed as possible, as the young plants will take a quicker and better growth. After the bed is well pulverized, by hoeing and raking, the seed mixed with dry ashes are to be sowed as evenly as possible over the surface at the ratio of a common table spoonful to every 80 square yards (cubic measure,) the bed lightly raked over or trod evenly with the feet, and well covered with brush, on which there should be no leaves, and protected from the intrusion of stock. So soon as the young plants attain the size of a dollar, the brush may be removed; if the weather is very dry, the brush may be suffered to remain to advantage, and when removed, taken off in the evening; with seasonable weather, the plants will soon be large enough for transplanting. The land designed for the crop should be fertile; if not naturally so, should be made so by manuring. Any common manure will answer a valuable purpose, tobacco being a plant that delights in a rich soil. The land should be deeply and thoroughly ploughed, whenever practicable, in the fall or winter, and subjected to the action of the frosts of winter. In this there is a two-fold advantage: 1st. It destroys many insects that injure or destroy the young plant. 2d. It renders the land more friable and more easily cultivated. As the season approaches for planting out the weed (which is here from May to July,) the land should be ploughed again and kept clean. It is then to be laid off with a plough 3½ feet one way, and 3 feet the other, and a small hill made in or on the check, as may be preferred for the reception of the plant. The hill should be raised a little above the common level of the surface—the size of the hill being a matter of fancy with the planter, and not regarded as a matter of consequence in the general. So soon as the plants have attained sufficient size for transplanting, they may be drawn from the bed and placed on the hills whenever there is moisture enough to prevent their dying. This is generally done after a shower: but should the land be very wet, it is best to wait until it dries or settles some, as the plant will do better set when the land is not too wet. The plant, if it survives the transplanting, will soon commence growing, and requires no attention until the weeds and grass begin to make their appearance, and must be subdued by the plow and hoe. Should the earth become hard about the plant, the hill should be lightly scraped

with the hoe. This will greatly promote the growth of the plant. When the plant becomes large enough, the bottom or plant leaves may be broken off. This is called pruning, and the land may then be deeply and thoroughly plowed, taking care not to injure the roots of the plant, and the plant hilled up by following with hoes and throwing the loose soil around it. In land that has been kept clean this may be the last ploughing; the weeds and bushes may be kept down with the hoe, should any appear. When the plant is large enough to top, the leaves nearest the ground are to be broken off and the bud taken out, leaving on the stalk the number designed for the plant.

The number of leaves, as was remarked about the size of the hill, is much a matter of fancy; yet it has more to do in forming the future character of the Tobacco than most planters seem apprised of. Experience has fully demonstrated that ten leaves are sufficient for a plant, and this is almost a universal practice among our best planters.—The first plants, if the crop has grown off unevenly may be placed to twelve leaves; the next topping may be ten, and as the season advances, the number may be lessened, as the appearance of the crops and the season indicate. This will insure more uniformity in maturing of the crop, and saves much labor, and adds to the value of the crop, making it more uniform in quality. At this stage of the crop, the care and attention of the planter is almost constantly required to keep off the worms and other insects which pray upon it, and in breaking off the suckers which soon appear upon the stalk at every leaf, ample employment may be afforded to every idler about the premises. As the plant approaches maturity, it begins to thicken, and assumes a stiff, slick and motley appearance, which the most unpracticed eye will readily detect. Should the weather be favorable (viz: dry,) the first ripe plants may be permitted to remain standing until a sufficient quantity is matured to satisfy the planter in making a regular cutting.—If, however, the weather be unpropitious, it is best to cut as fast as it matures, as it is subject to injury under such circumstances if suffered to remain too long. The harvesting of the crop is an important period in its cultivation, and neglect upon the part of the planter will bring loss in its future value. In cutting the plant, a sharp knife is to be used, and the stalk to be split about half its length, taking care not to break the leaves or otherwise injuring them, and the plant to be set with the butt of the stalk up, exposed to the sun. So soon as the plant is wilted enough to handle without breaking, they should be taken up and laid in a heap of seven to nine in a place, being governed by the size, and hung as soon as possible to prevent being scorched by the sun. The after part of the day is best for cutting; there is less danger of getting the plant sun-burnt. The sticks upon which the plants are hung are small split pieces of timber four feet long, and of sufficient size to support the plants. These are taken to the barn on a cart or wagon after receiving the plants, or may be placed upon scaffolds in the field, at the option of the planter. If the weather is fair, it is best to sun it, as it aids the curing, and adds to the strength and elasticity of the leaf after it is cured. Care should be taken not to place the sticks too close if the weather be damp and warm, as there is danger of injuring the plant. After remaining on the scaffold a few days, it becomes yellow, or assumes the color of a leaf in autumn; it must then be carried to the barn or curing house, and placed away, keeping the sticks far enough apart to secure a free circulation of air through them. If the weather is wet, it is best to take the plants to the house at once, and let the yellowing process take place in the house rather than risk the changes in the weather, as rain is always injurious to the plant after it is cut, and especially so after it becomes yellow. The curing process is one of the most important features in the future value of the crop, and too much care cannot be given it, a small neglect lessening the value of the crop seriously.

If the weather is dry and the Tobacco is not too much crowded in the house, the action of the atmosphere, assisted by a small portion of fire, will be sufficient to effect the object. If, however, the weather is warm and damp, the atmosphere will not aid very materially in curing the plant, and unless firing is resorted to, the plant is certain to be more or less injured. It is always safer after a house is filled with green Tobacco to rely mostly upon the action of the fire to a considerable extent. These should be small and slow at first, and continued so until the Tobacco is clear of the moisture engendered by the fire, is dried out and then increased until the leaf is nearly cured. When this is the case, the fires should be suffered to go out, and the Tobacco suffered to come in case, or get soft again. The quality of the article will be improved by permitting it to come in case once or twice before it is thoroughly cured in stem and stalk. Dry and sound wood is best for firing. If the object of the planter is to make a piebald or fancy article, care should be taken never to permit the leaf to get very soft during the curing process; and to make a really fancy article, the Tobacco must be thoroughly yellowed before, and cured entirely by fire. This particular description is, however, not more desirable or valuable to the consumer, as the essential properties of the plant are frequently destroyed by the action of the fire. As a general thing, it is better to cure the weed by a natural process of air and the action of the atmosphere, and where the planter is provided with a sufficient quantity of room to house the crop without crowding too close, the object can be attained without the aid of much fire, and the wood and danger of burning the crop saved, and in some markets increase the value of the crop. Having now arrived at the time when it is supposed the planter has secured and cured the crop, we proceed to give some directions in its future management and preparation for market—remarking that many, after all their previous care and labor, lose its profits to a good extent, by either a want of knowledge as to its management, or a carelessness which is inexcusable upon their part. After being for upwards of thirty years engaged in its culture, and to some extent a dealer in the article—after visiting the principal markets in the Union—I have long since come to the conclusion (and have never seen any reason for a change of the opinion), that the prices paid for the different qualities of the article by the purchaser is more generally a matter of fancy than of superior judgment on his part of the quality of the article bought, and that that fancy was generally governed by the care bestowed by the planter in preparing the article for market. If this opinion is correct, how very important for the planter to so prepare his crop for

market as to realize its greatest value, and I proceed now to speak definitely upon that subject.

After the Tobacco has been thoroughly cured in stem and stalk, it is then ready to commence stripping or taking the leaves from the stalk. In this process the plant first passes through the hands of the most experienced laborer on the farm, who takes off the bad or injured leaves, and ties them neatly in bundles of eight or ten. The plants, as thus culled, are given to others, who strip off the remaining leaves and tie them in bands of six or eight leaves, wrapping tightly and neatly with the tip of the leaf used as a tie, so as to form a head of one-and-a-half to two inches in length. Care should be had to make the bundles as uniform in size and color as possible, as it adds to the beauty of sample by which it is to be sold. When the day's work is done, let the Tobacco, neatly pressed through the hands, be put in a winrow, as it is termed; viz: laid straight in a bulk or pile of sufficient length to hold the day or two day's work, and only the width of one bundle and one-half, reversing each course so as to have the heads of the bundles out; here it may remain until the stripping season is over or the crop stripped. The first good drying spell of weather after the stripping, get the smoothest and smallest sticks upon which the Tobacco was hung, and hang up the Tobacco to dry; carefully shaking it out when hung, so as to secure a uniform drying. When the weather again becomes moist enough to bring the Tobacco in case, take it down and carefully bulk it away as before directed, only taking more care to straighten the bundles and make the bulk much wider; this is done by lapping the bundles over each course, similar to shingling a roof, the bulker, having his knees upon the bulk, carefully laying down the Tobacco as it is straightened and handed him.—When the bulk is finished, weigh it down heavily with logs or some heavy weight. Care must be taken that the Tobacco does not imbibe too much moisture, or get too high in case before it is bulked, as it will injure. So soon as the Tobacco becomes soft enough to handle without breaking, it may be put in bulk, and should the stems break a little under the pressure of the bulker's knee, no material damage will be done, provided the leaf does not crumble. A little attention will soon teach the most ignorant the proper order for safe keeping. The Tobacco will be safe in bulk, and will wait the planter's convenience to prise it in hogsheads.

In prising, the different qualities should not be mixed, and if the planter has been careful to keep them separated, no trouble will be had in assorting when ready to prise. In packing in the hogshead, care should be taken to have every bundle straight, and every leaf to its bundle. From a well packed hogshead, any bundle may be drawn without injury or interruption to the others. The usual way of packing is to commence across the middle of the hogshead, placing the heads of the first course of bundles about eight or ten inches from the outer edge and running the course evenly across; the packer then places the bundles of the next course in the same direction, the heads against the side or edge of the hogshead, and follows the circumference until the heads of the two courses come in contact; after that course is completed, he finishes the other side by placing the heads against the cask as before, so as to have three courses across the cask, the bundles all laid in the same direction, and the next layer is reversed, carefully placing each bundle as it is thrown or handed him. When filled, it is subjected to the press or screw and forced down.

Our hogsheads are from thirty-eight to forty-four inches across the head, and fifty-six to fifty-eight inches in length, and from 1,800 to 2,000 pounds can be easily prised in them. If the Tobacco is large, rich and oily, the harder it is pressed the better, and the better price it commands. These remarks are particularly applicable to those heavy descriptions of Tobacco known in Virginia as heavy shipping leaf, and in the West as Clarksville Tobacco, where the soil and climate are peculiarly adapted to the production of this description of Tobacco. In climates not so well adapted and soil of a different character, the same variety of the weed will assume a different character, being of finer or coarser texture, as the case may be, light and bulky, and destitute of oil and substance. Tobacco of this description should be managed as before directed, but prised lightly in the casks so as to admit of a free and open leaf, such being mostly required for cigar leaf.

There are several varieties of the weed, but as they all partake more or less of the same essential qualities under the same circumstances, it is unnecessary to enumerate them—the difference being more in the choice or fancy of the planter than in any material difference in the growth and product of the variety, all requiring the same labor and attention, and the same cultivation and management. Climate and soil have very much to do in forming the definite character of Tobacco, and seed of any variety taken to another climate and a different soil may produce a very different article, and observation and experiment alone upon the part of the planter can determine the best method of improving its character whilst becoming acclimated.

I do not regard it necessary to extend this communication (already too long) to a greater length. I trust I have said enough to enable you to make such an article as will meet the views and wishes of the Bavarian Consul.

Very respectfully, your ob't serv't,

ROBERT BROWDER.

☞We have several times recently had occasion to refer to the rapid advance in the price of land in the State of Virginia. The fact is a very gratifying one, and we chronicle all such evidences of increasing prosperity in the Old Dominion with a pride second only to that which we feel in the welfare of her neighbor on our side of the water. The latest of these indications is the following:

"According to the assessments of 1850, the value of lands with the improvements thereon in Floyd county, Va., amounted to $658,557.77. By the assessments of the present year they are valued at $1,547,814.23, being an increase in six years of $894,256.46, or within a fraction of 137 per cent."

THE CHINESE SUGAR CANE.—The *Western Farm Journal* states that the Chinese sugar cane has been used this season for fattening cattle in Warren Co., Ohio. The cattle appear to be very fond of it, and are said to have gained well, though it may be mentioned that they were fed with a peck of meal each per day, in addition to the "sugar millet."

THE CHINESE SUGAR CANE.

We hope that the introduction of this article will not induce another mania like that of the Morus Multicaulis speculation. The advice from the good book, to "try all things, and hold fast to that which is good," is as applicable to agriculture as any other subject to which it can be applied. We therefore advise our friends to make a trial of the sugar cane the ensuing season, but let it be on a limited scale. From the results, apparently well substantiated, which have been reported of its cultivation, we have strong faith in the belief, that it is destined to be one of the most important plants to our country, that has been introduced, for it is very evident that in all sections of our country it can be produced. At present, perhaps the syrup alone can be obtained from it, but no doubt in a very little while, simple machinery will be introduced by which the manufacture of sugar from the cane will be made in every State. A correspondent of the Grayville, (Ill.) Herald, writing from Wabash county, Illinios, in reference to his own experience in the culture of Chinese sugar cane in that region, says:

"On the 25th of May I planted about half an acre of ground, one year old. A portion of the soil was low and wet in the spring; in fact I covered the seed with mud, the other part was high and sandy; the consequence was when the dry season set in the wet part baked hard, and the high burnt up for want of rain. I plowed it when about ten inches high, and that was all the working it got, with the exception of a slight hoeing previous to plowing; my object was to ascertain the amount of saccharine matter contained in the stalks, and supposed enough would grow to make the experiment. Many of the stalks grew from sixteen to twenty feet high, (in the low ground it only grew twelve feet.) Having made a mill on which to grind it, I commenced on the 24th of September. The cane then received two or three frosts, which slightly injured the taste of the water. I am convinced that the amount of stalks I used can be grown on less than a quarter of an acre. The amount of water obtained from the piece was 270 gallons, from which I made forty five gallons, which in flavor and beautiful bright red color, is far superior to any molasses obtained from the South. I did not try to grain any of it, as it will not grain after being frosted; but I am convinced there will be no difficulty in graining it if tried previous to frost. If it is planted by the middle of May it will ripen by the end of August, and remain in good condition until frost, and if cut up and put in sheds (in apprehension of frost) it will keep well for a month or more.

"I will give a statement of what may be made per acre, judging from the amount of water obtained from each stalk. One of my neighbors, Mr. A. Degan, obtained from seven choice stalks one gallon of water, and in another trial made by Mr. McCleary, Sr., and myself, we pressed from ten stalks one gallon and a quart. The number of stalks in a hill should be from four to six. In my calculations, I only estimate one quart of water to the hill, allowing sixteen hills per square rod, which will make 2,560 hills to the acre, and this, at one quart per hill, will make 640 gallons of water, which will make 110 gallons of molasses. Valued at 75c. per gallon, it would amount to $82.-50 per acre, and I do not hesitate in saying that the amount may be doubled. I would urge upon the farmers of the Western country to try it. You will not only save, but make money by the operation. I am well convinced that in 1860 the Southern planter will have no sale for his Sugar in the State of Illinois. From present indications there will be 100 acres raised in Wabash county next year, which will save the county $10,000. The time to commence working the cane is when the seeds have changed from green to a dark red hue, although it will remain good until fairly matured."

We have received from Richard Peters, Esq., of Georgia, a pamphlet containing a variety of facts gathered from various sources, in regard to the cultivation of the Chinese Sugar Cane, and will present them to our readers in due time, to enable them to have all the necessary information for its successful introduction throughout the country. We present herewith a report from Ex-Gov. Hammond, of South Carolina, to the Beach Island Farmers' Club, and read before the Club on 2d Aug. last, and in our next we will publish a report of Dr. Robert Battey, Practical Chemist, and graduate of the Philadelphia College of Pharmacy, to the editor of the Southern Cultivator, detailing the mode of culture, harvesting, making of syrup, and various other interesting details, which will no doubt be very acceptable to our readers. We annex Gov. Hammond's report of his experiment in making Syrup. Having received enough seed (about half a pint,) to plant half an acre, he says:

I prepared a plot of ground on a northern slope of old, stiff and worn out land, in such a manner, and with so much manure, as would probably have made it yield, with average seasons, about twenty bushels of corn per acre. On the 22nd of March, I planted the millet seed in three feet drills, dropping every eighteen or twenty inches some six or eight seed. It was plowed and hoed often enough to keep the grass down, and about the 1st of July begun to head.—The heat had then been unusually intense for two weeks and has continued so up to the present time; and, latterly, the drought has been very destructive. I do not think this half acre would have yielded five bushels had it been planted in corn.—Having intended, however to ascertain whether the millet would make syrup, I had a rude mill put up with two beech-wood rollers.

Finding that by the 22nd of July the most advanced heads had passed the milk stage, I had 1,750 canes cut, that I supposed were a fair sample of the patch. The first 300 or 400 were passed through the mill twice, the remainder four times, and the yield was 194 quarts of juice. But ten canes that I selected, and passed seven times through the mill, yielded three quarts. Mr. Clark, one of our members, was present when this was done. The juice was received in common tubs, and tested by thermometer and sacchrometer, with a scale of 40°. The thermometer stood in every instance at 78°; the sacchrometer varied from

21½° to 23½°. At the latter point the juice would float a fresh egg. I boiled it in a deep, old-fashioned cow pot, and after six to seven hours boiling, obtained thirty-two quarts of tolerable syrup.

The next day I selected ten canes, the heads of which were fully matured, ten more in full milk, ten more the heads of which were just fully developed, and the top seed beginning to turn black; and again ten, comprising all these stages, but from which I did not strip the leaves. They were all passed through the mill seven times, and yielded nearly the same quantity of juice—about three quarts for every ten canes. The juice, tested by the saccharometer, showed that the youngest cane had rather the most, and the oldest rather the least, saccharine matter. The whole together, with that of a few other good canes, exhibited at 80° of the thermometer, 24½° of the saccharometer. From forty-two pints of the juice, I obtained after four hours' boiling, nine pints of rather better syrup than that made the day before. In these boilings I mixed with the cold juice about a teaspoonful of lime water, of the consistency of cream, for every five gallons.

These selected canes grew on the best spots of the patch, and probably, where corn might have been produced the present season at the rate of twenty bushels per acre. They were one inch in diameter, at the largest end, and seven and a half feet long, after cutting off the head, and a foot of the stem.

After this I cut down all the inferior cane, and cured it for forage.

On the 28th of July, two of the members of the Club (Dr. Bradford and Mr. H. Lamar) being at my house, remained to see the result of pressing and boiling 400 canes I had cut and stripped. Each of us selected ten canes, and put them through the press eight times; the result being as before, about three quarts for every ten canes. But even after the pressure, juice could be wrung from the canes by the hand, and we agreed that at least one fourth of it, and that the best, remained in the cane—so inefficient was my mill. The rest of the cane I ordered should be pressed six times, but we did not ourselves remain to see it done, nor did we count the 400 canes. The yield of the whole, however, was 37½ quarts. With the thermometer at 24½°; we boiled the juice until it run together on the rim of the ladle, and hung in a transparent sheet half an inch below it before falling; and this in two and a half hours. The result was six quarts, of choice syrup. The next day I repeated the experiment on a larger scale, with equal success, and I have brought to the Club enough of the syrup, to enable every member to try it and judge of its quality. All who have tasted it, agree that it is equal to the best that we get from New Orleans. In these last boilings I put a table spoonfull of lime-water, prepared as before, to every ten gallons. The whole process of clarifying and boiling was carried through in the same pot, and that very unsuitable from its depth.

I measured the grain from a number of heads, and the result was an average of a gill from each. I weighed a half peck of matured grain, after several days' exposure in the sun. It weighed four and three quarter pounds, equal to 38 lbs. per bushel. I weighed twenty pounds of the best cane cut for forage, after it was cured sufficiently to house. They weighed twenty-four pounds, equal to 30,000 pounds for 25,000 canes, which I think, might be grown on land that would make twenty-five bushels of corn with average seasons. I have tried horses, cattle and hogs, and find they eat the cane, its leaves and seed greedily, and fowls and pigeons the latter. I think, however, that when allowed to mature, the cane should be cut up fine for animals, as the outer coat is hard.

I did not attempt to make sugar, not having prepared for that. There can, however, be no doubt that sugar can be made from such syrup as this.—And, as they make more syrup in the West Indies per acre, than they do in Louisiana, only because the cane matures better, it is not unreasonable to infer that the millet, which matures here perfectly, and will even make two crops in one year, will yield more and better sugar than the Louisiana cane.

Beginning to cut the cane as soon as the head is fully developed, it may be cut for a month before it will all ripen—how long after that I do not know. A succession of crops might be easily arranged so as to insure cutting and boiling from the 1st of July (probably earlier) until frost. I have housed some stalks immediately from the field, to ascertain, hereafter, whether thus treated, it will yield juice and make syrup next winter.

A good sugar mill, with three wooden rollers, may be erected for less than $25, and a sugar boiler that will make thirty gallons of syrup per day, may be purchased in Augusta for less than $60.

This millet will, of course, mix with any other variety of the millet family planted near it. Unfortunately I planted broom corn about a hundred yards from mine, and shall, therefore, have to procure seed elsewhere for the ten acres I intend to plant next year.

I have now stated the chief particulars of my experiment. Every member of the Club is competent to draw his own conclusions. A single experiment—especially one in agriculture—is rarely conclusive. I may err myself, and might cause others to err were I to express, with any emphasis, the opinion I at present entertain of the value of this recently introduced plant.

[We have received from the Patent Office, a very full description and drawing of the plant, and mode of cultivation, &c. which we will also publish.]

The next U. S. Agricultural Society's Exhibition.

To the Editors of the American Farmer:

GENTLEMEN:—At the annual meeting of the United States Agricultural Society, to be held in the city of Washington, early in Jannary, it will be determined where the next Exhibition of that Society shall be held.

In view of their previous Exhibitions, having been held in Eastern, Western and Middle States, would it not be well for the citizens of Baltimore, and the agriculturists of the State, representing the South, to extend an invitation to the Society, at their annual meeting, to hold their next Exhibition near the city of Baltimore.

At the late Exhibition held in Philadelpha, Maryland was among the largest contributors. We are, therefore, thoroughly identified with the Society, and if it is to be continued as a National Institution, the time has come for an Exhibition to be held South of Mason and Dixon's line; and, in our judgment, the city of Baltimore, all things considered, is the place.

If the project meets your approval, and also that of the city press, but little effort will be required to carry it out. M.

PREMIUM ESSAY
ON
THE FARM-HORSE,

BY THEODORE BROWN, OF JEFFERSON CO., KY.

The following Essay was awarded a premium of $40, offered by the Editors of the Louisville Journal, for the best upon the subject. The award was made by Judges appointed by the Directors of the South-Western Agricultural and Mechanical Association. It will repay a careful perusal. In no section of the Union are the principles of breeding better understood than in Kentucky, and in accordance with our views, of the absolute necessity to meet the requirements of the country in this department of Farm Economy, it is our determination to give special attention in our pages to the subject. The premium for the second best Essay, of $20, was awarded at the same time, and will be published by us hereafter.

To the Southwestern Agricultural and Mechanical Association:

Heretofore it has been too much thought that the broken down, refuse stock of the turf, the saddle, or the dray would still answer for the farm. It is now, however, believed that, though individuals of these several classes may be suited for farm purposes, neither class as a whole, is competent to the efficient performance of all the duties of the farm-horse. Those duties are of a most diversified character—every change in the seasons, every variation in the roads, or in the surface constitution and condition of the soil calling into play different powers of the farm-house. Thus the wagon, with a light load, on a firm, well graded road, requires in the horse wind and action and spirit combined with gentleness; while on muddy or hilly roads it would call for weight of carcass, tough, large muscles, true, steady pulling, and powers of endurance. Plowing, too, is no less varied in its demands, its heavy, constant, long-protracted work taxing the stronger powers, and the cultivation of the crops, particularly in July, imperatively demanding wind and strength *both*, and sufficient evenness of temper not to *throw away either*. And in all sorts of farm work there is need of health and thrift in the animal to perform it well and with justice to itself.

What race in America "is sufficient for these things?" The Conestoga is not, for wind and action are wofully deficient in this breed. The race horse, on the other hand, possesses sufficient wind and action, but generally lacks size and good temper, being restive, vicious, and unsafe till almost worn out with age and hard service. The Canadian and Morgan horses both combine excellent qualities, but too often lack size. A cross upon the Conestoga and race horse with the Morgan would doubtless produce a good race, but similar crosses on better draught horses than the Conestoga have already been made in England and France, and breeds gotten thought to be specially adapted to the farm; and it would therefore be a quicker way of getting what we want to import one or more of these breeds. And is it not the peculiar province of your Association to encourage such importation by liberal premiums? The breeds referred to are the Cleveland Bay and the Clydesdale of England and the Percheron or Norman diligence horse of France.

"The Cleveland Bay is generally clean and well made in most of the parts, being very strong and active, answering perfectly for the team, coach, and saddle. There are few horses capable of greater or longer continued exertion in any of these intentions than these."—*Dr. Reese's New Encyclopedia.*

"The Clydesdale is a valuable breed of cart-horses, bred chiefly in the valley of the Clyde, hence their name. They are strong and hardy, have a small head, are longer necked than the Suffolk, with deeper legs and lighter carcasses."—*Farmers' Encyclopedia.*

Says Mr. Edward Harris, of Moorestown, N. J., who imported a pair of Norman horses: "I have been frequently questioned as to my reasons for selecting this horse in preference to the English draught horse. My reply has always been that the draught horse of England, whenever brought to this country, must prove a failure; he cannot move out of a walk, which is saying quite enough for him." (He probably refers to the heavy black horse, not to the breeds above described.) "The true Percheron or Norman Diligence horse, on the contrary, combines more strength with activity than any horse I ever sat behind. All travellers, on entering France, are struck with the properties of these horses as displayed in drawing the ponderous machine called a diligence, by which they are conveyed through the kingdom at the rate fully equal to the average of stage travelling in this country. English horsemen confess that their road horses could not hold out the same pace before the same load." (*Farm Enc.*)

One or all of these three varieties might answer, without crossing. But it might be necessary to cross with the race-horse or with the Morgan, just as wind and action, or wind, action, and good temper seemed most needed. Mr. Stephens, the distinguished author of "The Book of the Farm," thus describes a cross of this kind on the Clydesdale: "He is not a thorough-bred Clydesdale, having a dash of the coaching blood in him, a species of farm-horse very much in use on the Borders, and admired for their action and spirit.—This gelding exhibits such a form as to constitute, in my estimation, the very perfection of what a farm-horse should be. His head is small, bone clean, eyes prominent, muzzle fine, and ears set on the crown of the head. His neck rises with a fine crest along the mane from the trunk, and tapers to the head, which is beautifully set on, and seems to be borne by the neck with ease. His limbs taper gradually from the body, and are broad and flat—all excellent points in the leg of a draught horse, giving it strength and action. The back of the fore-leg from the fetlock-joint to the body is straight, indicating no weakness in the limb—a failing here causing the knee to knuckle, and rendering the horse unsafe in going down hill. The hind-legs, as well as the fore ones, stand directly under the body, forming firm supports to it. The body is beautifully symmetrical. The shoulder slopes backward, the withers being light and thin. The sloped position of the shoulder affords a proper seat for the collar, and provides the muscles of the shoulder-blades so long a lever as to cause them to throw the fore-legs forward in a walk or trot; and with such a shoulder a horse cannot stumble. The back is short, no longer than to give room to the

saddle. The chest is deep, giving it capacity for the lungs to play in, and room for the muscles required in draught. The top of the quarter is rounded, the flank deep, and the hind-quarter long. On looking on the side profile of the entire animal, the body seems made up of large quarters, joined together by a short, thick middle, suggesting the idea of strength ; and the limbs and neck and head are so attached to the body as to appear light and useful.

"In a well formed horse, I may remark, the line from the fetlocks to the elbow-joint is equal to that from this joint to the top of the withers. In a low-shouldered, leggy horse, the first line is much longer than the last ; but, in the case of this horse, the body is rather deeper than the leg is long, realizing the desideratum in a farm horse of a thick middle, and short legs. The line across the ribs is, like the back, short, and the ribs are round. He is 16 hands. His walk is stately, and he can draw 3 tons on level ground, including the weight of the wagon. He is a well known animal in Edinburg, and is generally admired. He is the property of Messrs. Howey & Co., the great carriers from Edinburg, into England."—(Farmer's Library, vol. 3, No 10, pages 439—440.)

It would be useless repetition, to detail the points of the brood mare. From whichsoever of the breeds above recommended she should be selected, she should be a perfect specimen of that breed. As a general rule in breeding animals of all kinds, when there is much difference in size, between the male and female, the latter should be the larger—because the fœtus will probably be large, and require more capacity of womb than can be afforded by a small female. This is a point much insisted on by Lewis F. Allen and other scientific breeders. A case has occurred this season on the farm of the writer, demonstrating the error of the opposite practice. He had bred a fine blooded mare, about 15 hands high, to a large draught horse, and the foal come into the world with a crooked leg. True it has since become straight, but this might not always be the case. The mare as well as the horse should be known to be of good families on both sides; otherwise the foal may inherit defects from remote ancestors. During pregnancy the mare should be worked, or ridden gently, never put into a cart, and turned out for a month or two before delivery. About the time that event is expected, hogs, mules, and colts must be carefully excluded from the lot—a neglect of this precaution may cost the life of the foal. The foal should be dropped during the grass season.—The weather is then mild, and pasturage abundant and cheap. If worked while suckling, the mare should be fed well and not heated—and the colt must be suckled twice a day, besides being with the mother at meals and during the night. This is a most convenient time for gentling the colt—and a litte pains, now, greatly facilitates the breaking when grown. If the colt comes in the fall, it should run with the mother during the winter, on pasture of grain or grsss if convenient, but, if not, on good clover or timothy hay, cut in the blossom state. Curing hay at this stage makes it sweeter, more nutritious and digestible. John S. Skinner records experiments proving this conclusively. Grain enough must be supplied to keep both colt and dam in good order. Shelter them also from the north-west winds, and from rain and snow. This can be done cheaply with rails, forks, and straw. When a colt is weaned in the fall, it can be treated during the winter, just as a mare and colt would be if together. Give a colt company for a while after weaning; but be sure it is *good company*. A breachy horse or colt should by no means be selected for this purpose; it has a *contagious habit more to be dreaded than the distemper—the disease being curable, the habit incurable.*

If the mother of the colt is breachy, she should be kept in a secure lot, and yoked if necessary, to keep her from jumping. A breachy animal is so annoying, corrupting, and expensive on a farm, that, unless uncommonly valuable, it should be gotten rid of. The growing colt should never be allowed to get thin, abundant nutritious food developing the bone as well as muscle of a young animal. "The ponies of Shetland, and the still-more diminutive steeds of China, when bred on rich English pastures, rapidly increase in size. The horses of Arabia do the same."—(Farmer's Encyclopedia—article, Wild Horse)

At three years of age the young horse, being strongly and properly geared, can be put to work in a wagon beside a gentle horse and in charge of a careful, experienced driver. It should not be made to pull much at first, but merely to walk along gentle, and get accustomed to the wagon and gear. It can be taught to pull afterwards.—As soon as it becomes chafed, or galled, it should be turned out till well. Besides the inhumanity of working a colt or even a grown horse with sore shoulders, it forms a habit of balking, and creates a sore knot ever afterwards in the way of the collar, and liable to gall whenever the work of, the animal is at all severe or protracted. At four years of age the young horse can be put at almost any kind of work for which it is sufficiently gentle, but not kept at it long enough, if very laborious, to break down or be strained. The five year old need not be favored, and the six is in the prime of life if well broken.

Stables should be kept clean and well littered and warm in winter. In summer the horse keeps cooler and more comfortable on pasture at night; and when fed at noon at that season, an open shed is preferable to a stable, unless the latter is uncommonly well ventilated. An experienced plowman recommends washing the body of the work-horse in hot weather; he thinks it enables the horse to endure the heat a great deal better while at work. "There can be no doubt it contributes to the health of the animal. The same reasons urged in favor of thorough currying and rubbing would particularly commend this practice and be very refreshing in hot weather, and altogether beneficial, unless done while the animal was perspiring too much; in this case it would close the pores of the skin and give cold; this result would also occur, no doubt in cool chilly weather. Stephens particularly warns us against washing the horse higher than the knees in winter. "There is danger," he observes, "of contracting inflammation of the bowels or cholic, in washing the bellies of horses in winter; and to treat mares in foal—which they will be at this time of the year, in this way, is little short of madness." He recommends watering before meals and rubbing afterwards, as a preventive of colic; that plan allowing the food to settle some before the animal is put to active service. In summer, and also in the warm weather of spring and fall, horses at work should be watered between meals. They are too often allow-

ed to suffer for water during busy season. A cistern, with a watering trough adjoining the stable, gives great security for the regular watering of the animal, as well as of his cut or crushed food.

Oats and rye straw cut up and mixed with bran or shorts has long been esteemed by farmers a nutritious, wholesome food, cheaper than grain-feeding in the old way.

"*Manger Feeding.*"—A mode wherein the wasteful and expensive rack is superseded, and hay, instead of being fed separately, is cut up and mixed with the grain—has been much approved in England. The reasons why it is both cheaper and better than corn or oats and hay separately, are very satisfactorily given by Youatt, page 372, as follows:

The system of manger feeding is becoming general among farmers. There are few horses that do not habitually waste a portion of their hay, and, by some, the greater part is pulled down and trampled under foot, in order first to cull the sweetest and best locks, and which could not be done while the hay was enclosed in the rack. A good feeder will afterwards pick up much of that which was thrown down; but some of it must be soiled or rendered disgusting, and in many cases one third of this division of their food is wasted. Some of the oats and beans are very imperfectly chewed by all horses, and scarcely at all by hungry and greedy ones. The appearance of the dung will sufficiently evince this. The observation of this induced the adoption of manger feeding, or of mixing a portion of the chaff with the corn and beans. By this means the animal is compelled to chew his food; he cannot, to any degree, waste the straw or hay; the chaff is too hard and sharp to be swallowed without considerable mastication, and, while forced to grind that down, the oats and beans are ground with it, and yield more nourishment; the stomach is more slowly filled, and therefore acts better on its contents, and is not so likely to be overloaded; and the increased quality of saliva thrown out in the lengthened maceration of the food softens it, and makes it more fit for digestion.

But an improvement even upon the cut and mixed food here recommended by Youatt, has been made since he wrote upon the subject. It consists in crushing grain, shuck, cob, straw and hay, and thus giving the *economic advantage* he speaks of to a still greater degree, (for he does not mention the cob, now known to contain a considerable amount of nourishment,) and at the same time saving the horse the labor of grinding down his food, leaving him the time thus saved for repose. The admixture of the roughness (chaff as he calls it) keeps the ground grain from cloying in the stomach, and the water added in mixing, supplies the place of the saliva furnished in *slow feeding*, for softening the food and preparing it better for the digestive organs. Many farmers estimate the advantage in saving food by this mode of feeding to be as much as one-half.—The machinery for crushing varies greatly in the quantity of power required and work executed in a given time. Some can be worked by hand, some by horse-power, and some by steam. Sinclair's, costing $35, can grind about five bushels an hour, with one horse and two men. (See Cultivator, January, 1852, page 56.) A. N. Wood & Co.'s portable steam engine, of eight horse-power, is used by J. A. Humphreys, Esq., of Versailles, Ky., in preparing food with corn-crushers and straw cutters for one hundred head of mules, and about one hundred head of cattle and horses.

With one of Sinclair's screw-propeller Cutters he has cut up a four-horse wagon load of oats in twenty-two minutes, and with Pitt's Crusher he has ground thirty bushels of corn in the ear per hour. (See Cultivator, July, 1856, page 211.) On the same page is described a convenient "Cut-Feed Mixer," intended to prevent the accumulation and freezing of water in the bottom of the box in the winter. The box is a half-circle, and the lid another half-circle, the box containing the feed, and the lid the wheel, with three spokes or paddles, for mixing the food. After the water is poured in upon the food, it requires but half a minute to do the mixing completely. *Boiling* grain for work horses is of very questionable advantage. Stephens (page 547 Farmers' Library) gives the results of very careful experiments in feeding boiled food, raw food, and bruised food—the last probably equivalent to crushing. "The two first," says he, "gave results so nearly alike, that it seems inexpedient to incur the expense of cooking food for horses. Bruised raw grain seems the most nourishing, and, in not requiring cooking, of course the most economical mode."

Pumpkins, carrots, beets, turnips and potatoes, cooked or raw, make a very agreeable addition to the horse's bill of fare. The two first are probably the most wholesome and nutritious, and the first and the turnips the cheapest.

Horses should be salted once or twice a week. For mares in foal the salt must be free from blood.

An essay on the farm-horse would, in the estimation of many, be very incomplete without some mention of the merits of the mule, for they regard this the best of all work-animals for the farm.

Mules are smaller than horses, but when from 14½ to 15½ hands high, are capable of performing any of the ordinary farm work of the latter. They may not be equal to large horses for a single hard pull, but their powers of endurance are wonderful, and their ability to stand heat superior greatly to that of horses possessed of as much strength. In the West Indies, and in the Southern States, they are employed almost exclusively instead of horses. Their docility is greatly superior to that of the race-horse, the only breed of horses matches for them in the heat of the July or August day. In health and thrift and hardihoood they have greatly the advantage over horses. They are rarely known to be sick, perhaps never blind, except by accident, can often work a whole winter on a farm without shoeing, can be maintained on less food and cheaper food—the proportion of hay to corn being much greater than with horses, and the whole amount of food no more than two-thirds as great—they suffer less, and recover more easily from neglect and abuse, and are so proverbial for longevity that the question has been asked, "Did anybody ever see a dead mule?" Some have been known to attain the age allotted to, but so rarely attained by man, viz: three-score years and ten; and many have been known to be valuable for work at from 30 to 40 years of age, whereas it is a rare thing for a horse to be worth anything after 20 years. They are better than horses for cultivating crops, their feet being smaller, and their step more straight and true, and also requiring a shorter swingle-tree, they can be driven closer to the crop without treading on it or breaking it down. Their mischievous propensities are perhaps greater naturally than those of horses; but if they are brought up and treated properly, they are by no means troublesome. The

writer owns a pair of mules which have been working on the farm for about seven years, and have never gotten into mischief, except when led into it by breachy horses. Neither have these mules given any appreciable trouble by the stubbornness for which they are thought to be remarkable. In his opinion the stubbornness of the mule results from abuse, and its mischief from negligence on the part of the farmer, whose low fences may tempt the horse as well as the mule to become breachy.

John S. Skinner, in his valuable essay, "The Ass and the Mule," sums up the comparison between the horse and mule, with the opinion that the horse is (all things considered) twice as expensive an animal for farm-work.

In breeding mules for the farm, the best work-mares should be selected. "There are three varieties of jacks, the heavy Spanish jack, with slouching ears, answering to the call of the cart-horse, another Spanish breed called the Andalusian, with ears shorter and erect, of tolerable size, plenty of bone, active and more spirited, answering to the hunter, and the Arabian jack, with ears always erect, of a delicate form, fine limbs, and full of fire and spirit." See Skinner's Essay for a fuller description.—Though judicious crosses might produce a better jack than either of the three now is, the Andalusian is at present the best suited to the wants of the breeder for the farm.

AN IMPORTANT MOVEMENT.

Under this caption we find the following in the December No. of the Pennsylvania Farm Journal, the editor of which says, that a "powerful and influential company has been formed in Boston for the manufacture of manure, and it is proposed to form a similar one in the city of Philadelphia, with a capital of one hundred thousand dollars, in a thousand shares of one hundred dollars each. A chemist of high reputation will preside over its manufacture, thus securing to a consumer the unvarying quality of the manure made. Its constituent parts have been submitted to several of the most distinguished chemists in our country, and in every instance they have given it their warmest approbation. The formation of such a company would be beneficial in more respects than one.—Many thousands of tons of blood and offal can be collected annually in Philadelphia and vicinity, which now only serves to breed pestilence and disease, and which if properly prepared, would add very materially to the fertilizers of which the farmer stands so greatly in need. As a sanitary measure alone, it is deserving of the warmest support, while its value as a manure can scarcely be estimated. The immense amount of fertilizing matter annually wasted, would be brought into profitable use, and all parties benefitted."

This is all the information we have upon the subject, but we will endeavor to keep our readers advised if any thing grows out of the project mentioned:

"It is now an admitted fact that Guano, until some substitute is found for it, is an essential element in good and profitable farming.

The price to which Peruvian Guano has advanced, with the certainty of a still further rise, has directed the attention of all reflecting minds to the important question of how they can render themselves independent of this costly manure. *A solution to that question has been found, and a complete remedy for the evil.*

We possess within ourselves all the elements for the formation of a far more powerful fertilizer than the best Peruvian Guano.

The proof of this assertion is as follows:

The only component parts of Guano really valuable to the soil, consists in its Phosphate of Lime, and that remnant of animal matter, which time has left in it, capable of forming ammonia.

A large portion of its whole weight consists in useless, non-availing matter: now it is clear to the common sense of any man, that if a compound be formed wholly composed of pure phosphate of lime and the richest nitrogenous matter in that chemical state best adapted to the formation of ammonia, when placed in contact with the soil, and without any of the extraneous matters contained in guano, a far more potent and more valuable fertilizer is obtained.

The attention of the first agricultural chemists in England was directed to this object, and some four years ago it was successfully achieved by the following means. The blood of animals being collected in large quantities, the water it contained amounting to some seventy-five per cent. being removed the solid portions were so chemically treated as to produce a highly concentrated nitrogenous matter, in which all the elements of fermentation or decomposition were temporarily arrested, but which was in the most favorable condition possible for the creation of ammonia; when by contact with the elements of the soil and air, its fermentation and decomposition commenced. This substance so prepared was mixed only with pure Phosphate of Lime, and *thus was obtained an unadulterated compound of those pure elements which alone nourish the growing crop to its fullest maturity and permanently enriches the soil.*

So valuable is this discovery considered in England, that a company was formed, presided over by the most wealthy and enlightened Agriculturist in that country. The gentleman selected for their chairman is Mr. Jonas Webb, whose reputation as the largest and most scientific sheep breeder in the world, is as well known in this country as in England. The high standing and reputation of these gentlemen were a sufficient guarantee to all who wished to use this manure; and the rapidly increasing success of the undertaking up to the present time has been unparalleled. Mr. Webb himself, who annually grows five hundred acres of sweet turnips for his own stock, uses no other manure, and is unrivalled in his crops.

The same discovery secured by Letters Patent in this country is now offered to the Agriculturalists of Pennsylvania."

DEVON CATTLE.—This breed of cattle is rapidly gaining favor in our State. At our recent State Fair, calves of this breed eight months old, sold for $200, and we learn that the celebrated premium cow, "Beauty," and her calf, was sold by Dr. Baldwin, of Montgomery, to T. J. Judge, Esq., for about $500. We are glad to see this spirit for fine stock getting up in our State—it will most certainly have a salutary effect in improving our cattle, which, with us to a recent date, have been so much neglected.—*Alabama Cotton Planter.*

For the American Farmer.

PREPARATION OF SEED—AN IMPORTANT EXPERIMENT.

Messrs. Editors:—The arrival of your useful journal for December, reminds me of a promise to send you an account of an experiment, made last year, in growing small grain.

This, and kindred subjects, have occupied my attention for many years; and I have experimented, when opportunity permitted, not with a view to excite, or satisfy others, but merely to prove to myself the possibility of increasing crops, on all soils, by a preparation of the seed. The practice of preparing seed is by no means a modern invention. The learned Blumenbach once remarked to me, "what is new is not true, and what is true is not new," and this would almost seem a literal truth, for often, on investigation, we find, what is considered a modern invention, is in reality, of great antiquity. The Egyptians, and other nations, practised the art, and I have reasons for believing that it made a necessary part of their system of husbandry.

After multiplied observations, and varied experiments, I have arrived at the conclusion, that a proper preparation increases, vastly, production. I also believe, that the same cause renders the plant less liable to the casualties of disease, and the destructive action of insects; and in small grain, upon which my experiments have principally been made, increases the quality and quantity of the grain, as well as adding greatly to the size, healthiness and amount of straw.

These observations have been repeatedly corroborated by those who have had occasion, and taken sufficient interest in the matter, to compare and examine into the subject.

As the experiments were instituted for my own personal satisfaction,—and they have been varied and progressive—I have not found it necessary to be exact as to measurement of ground and product. Varied plantings, side by side, offered the means of comparison for my purposes. At the instance of a friend, I carefully measured the ground planted last year in rye and wheat, in which I was kindly assisted by my neighbor, Mr. S. Crawford, who witnessed the preparation of the ground, and the seeding, and was present at the threshing. It is scarcely necessary for me to remark, that no manure of any kind was used. Nor do the lands in this vicinity come under the head of rich; on the contrary, they are considered light, and heavy crops are not expected of them, in their present condition, whatever they may have been originally, or rendered by fertilizers. My efforts have been to increase the product economically, and as all things are relative, the principle is not changed, whether they be rich or poor.

The ground seeded, amounted to nine and a half acres—seven and a half in rye, and two in wheat. It was exposed to the N. E. and N. W., and with a gentle declivity to the low grounds, part of which it included. The top of the hill, which I thought the poorest, (and those who have known the place much longer than myself, express themselves as decided upon that point,) was sowed with rye, the seed having been previously prepared; through the entire length, and in the centre, a strip of about two lands, was sowed with the same seed, in its normal state. The ground sowed with prepared seed, measured three acres. There was a manifest difference in the size of the heads, straw, and grain, between the prepared and not prepared. Even in casting his eye over the field, the most casual observer could at once perceive the difference, for it was on either side like a step. That upon which the unprepared seed was planted, is comparatively new ground, the stumps still standing, and the low grounds included, may be called rich, judging from the corn I have seen grown upon it. The crop from the prepared seed was even, tall, and heavy, the heads long, and bending over. That from the unprepared was uneven, much of it small, (not knee high) and not worth cutting. This was particularly the case with the wheat, which was injured by the fly.

The three acres, from the prepared seed, yielded 36 bushels. The six and a half acres, from unprepared seed, yielded rye, 33 bushels, and wheat 9 bushels—42 bushels.

The grain from the prepared seed was pronounced remarkably fine, heavy, full, and decidedly superior to that from the unprepared. Indeed, a neighbor, who had purchased for an extra price, choice rye, found on comparison, that my grain from prepared seed, was decidedly superior.

I have no reasons for believing that these results are different from what I have produced on former occasions. It was all put in by the same hand, at the same time; and if there was any advantage in the treatment, it was in favor of the ground planted with unprepared seed.

Double the yield by preparation is an important difference, and that particularly, when we consider the small cost of preparation.

In a letter to Mr. Earle, late President of the Maryland State Agricultural Society, in favor of a scientific institution, projected for the advancement of agriculture, &c., in the State of Maryland, which you published in the last number of the Farmer, I gave a few instances, showing the utility of science to the arts, including agriculture. The above results are further and apposite instances, and which may have some weight with those who are skeptical, as to the practical utility of science. This will be the more apparent, when we come to look at the possible difference to be anticipated, if a similar mode of planting should be adopted, with success, throughout the world. For example, Mr. D. J. Browne, of the Patent Office, in the recent report of Mr. Mason, the Commissioner of Patents, in speaking of the Turkish Flint Wheat, says:—"Estimating the present annual crops of wheat grown in the Middle and Southern portions of the United States to be 100,000,000 bushels, averaging say 20 bushels to the acre, the increased production in those sections, if the Turkish Flint Wheat alone were cultivated, and the ratio of yield as above would be 50,000,000 bushels, which would often add to the yearly resources of a single farm $500, and of the country, at least $50,000,000." My own impression is that Mr. Browne places too high an estimate on the yield per acre. I should, from my observations, reduce that figure from twenty to ten, as much nearer the truth. Some years back, Dr. Darlington, of West Chester, Chester county, Pa., than whom there is no higher authority, told me that 15 bushels per acre, he thought a high estimate for Pennsylvania, and the yield in that State is far above that South of Mason and Dixon's line. Supposing the average to be ten bushels, and taking the increase of one half as possible, by

preparing the seed, instead of doubling, which I have done, the United States, or the public, would be indebted to science for an increase of yield in that portion of the Union, for 25,000,000 bushels of wheat alone, not including other crops, and making this calculation extend with the same increase in proportion over the whole grain growing region, how stupendous would be the result and consequences.

The great merit of this method is, that it holds out a hope for greatly ameliorating the condition of those whose lot has been cast upon thin or impoverished soils. To such, the present price of Guano would appear to put that manure out of the question, and the application of stable manure in sufficient quantity, impracticable.

I design to experiment upon our great staples, cotton and tobacco, and should the experiments prove as satisfactory as I think, and hope they will, the result will be highly important to older settled Southern States. Very respectfully, yours,

T. G. C.

"The Home," Prince George's co., Md., December 14th, 1856.

EXPERIMENTS WITH MANURES.

The following letter to a gentleman of this city, from Dr. David Stewart, Chemist of the Md. State Agricultural Society, was received too late for our last number. It contains several points of interest and value, to those who think, and has been handed to us for publication in the Farmer:

SOME OF THE UNCERTAINTIES OF FARMING.

November 19th, 1856.

Dear Sir:—In the American Farmer of this month, page 133, I have given the results of some of my experiments with different chemical combinations, upon a soil of known quality, devoted to this purpose by the Faculty of St. John's College. One of these compounds you ordered to be prepared for me at your own expense. During the past four or five years, I have used it on crops of corn, wheat and oats, on some parts of my own farm with excellent results, both primary and secondary, as detailed from time to time in the publications I have made in the American Farmer, and other reports still in MSS.—all of which you have seen, or can refer to. The only apparent failure that I remember on this farm, was a mixture of the silicates and hickory ashes, the former supplied by Mr. Stimpson, the latter from my own cellar; I supervised the mixture, and witnessed its application to the land, I also weighed with my own hands the product of the shocks of corn as it was husked, *in the field*, so that there could be no mistake by judging from appearances or the vague impressions of farm hands, who are apt to report effects, by the eye of prejudice, without weight or measure,—as the great philosopher did with potassium, when he pronounced it heavy, because metallic in appearance.

I will venture to say, from my own experience and observation, that not one experiment with manures in 1,000, is fairly tried. There is among the agricultural community every disposition to *test* the effects of manures, *and no expense is spared in their purchase and application*, but no time or attention is devoted to noting the results, and *especially the secondary results, or those of the second and third year*. Some of our most valuable manures are apt to fail entirely the first year, (there being an abundance of their elements in the soil for *one* crop,) but after that they become *relatively* deficient, unless supplied; other and less valuable manures *are never paid for unless by the first crop*.

Last autumn, in Cecil county, I applied a mixture of one ton of Peruvian with two tons of Colombian Guano, to 20 acres of wheat; and several adjoining acres of this (30 acre cultivation) was dressed with several packages of a phosphatic compound, presented to me by a manufacturer in Hagerstown. My whole crop of wheat was about 250 bushels, and my portion of this sold for $159.45: deduct from this, commissions, and some 25 or 30 bushels raised on an improved acre near the house that was not dressed with artificial manures, and it will be found that I actually paid more for the Peruvian Guano, &c., than my crop sold for. "My neighbor applied at same time, six tons of Peruvian Guano to an old field of 40 or 50 acres, on which he sowed 50 bushels of wheat, and his whole crop amounted to 450 bushels,"—deduct from this the seed, and one half for cultivation, and we have $277, or about $100 less than the cost of Peruvian Guano applied.

And now, my dear sir, you are prepared to hear the unpublished experience with silicates at Annapolis during past summer,—experiments upon which I had relied more than the corn experiments published in the American Farmer of this month. We applied the soluble silicates of potash and soda, and several varieties of phosphates separately to several plots in our lot of potatoes—in all, say two acres. Our whole crop was about 30 bushels, or much less than the cost of seed potatoes and cultivation; but the fact is, that the drought killed the potatoes outright, only leaving a straggler here and there, and the manures produced a perfect wilderness of grass and weeds during the autumn.

I say the above is our *unpublished* series of experiments, but if you think that the evil results, as well as the good results should appear, I have no objection; you can head above "Some of the uncertainties of farming."

Yours faithfully and respectfully,

David Stewart, M. D.,
St. John's College, Annapolis,
Chemist of Md. State Agricultural Society.

To E. T. Ellicott, Esq., Baltimore.

Plowing by Steam.—The application of steam to plowing is destined to prove successful, and will ere long produce as great a revolution in agriculture as it has already in locomotion. This is our belief, albeit the attempts heretofore made to accomplish the object have proved unsuccessful. Among recent allusions to the subject, we observe the following hopeful item in a letter to a Cincinnati paper, written from the Indiana State Fair:

"The steam plow, of Baltimore, [Hussey's,] which has created so much excitement at the Eastern exhibitions, is here, and is attracting much attention. It is a land locomotive, with plows attached, and in a clear field tears up the ground at a terrific rate. As almost any number of plows can be drawn by it, there is no doubt that it will come into general use upon our Western prairies, where lands are "broken up" by contract. It will not be successful, we think, in any other kind of plowing, being entirely too costly and unwieldy for ordinary farming purposes."

For the American Farmer.

SUPER-PHOSPHATE OF LIME.

LIBERTY-TOWN, MD., Dec. 1st, 1856.

GENTLEMEN:—Having had some experience for the last six years in the preparation and use of this valuable fertilizer, I feel it due to my fellow-farmers, to lay that experience before them, through the columns of your valuable paper. The high price of Peruvian Guano, and the doubts existing in regard to the availability of the various substitutes for that article, make it peculiarly important at this time, that the experience of all, upon the subject, should be made known, in order to furnish the agricultural community with means to supply their present wants. Of the high value of this article, properly made and judiciously applied, there cannot be a doubt; and it shall be my effort to present you my experience, both in its preparation and use, as plainly as I can. In this number I will give my mode of preparing it; in my next, the manner of applying it to the soil; and in my third communication, I will give the results of its use, honestly and faithfully stated.

My mode of preparing the Super-Phosphates is the following:—I procure the bone, as finely ground as I can get them, which I put into a common tub, sufficiently tight not to leak. In putting them into the tub, I am careful to moisten them thoroughly, in which condition they remain until they heat, which will be in from twenty-four to forty-eight hours; I now take the acid, one pound for every three of bone, and dilute it, by adding to it twice its *bulk* of water. The acid thus diluted, I now add to the bones, by degrees, carefully working the whole mass, until it is all added; after which I cover over the tub, so as to retain the heat, which is freely evolved. The mass should be thoroughly worked over two or three times a day, until the process is completed, which will be in from twenty-four to forty eight hours. I have tried the plan of Professor Norton and Dr. J. Higgins, for preparing this article, but greatly prefer the above for obvious reasons.

There are one or two circumstances to be carefully attended to in the preparation of this article. The first is, to have the bones as fine as they can be made, as the acid will act upon them much more readily when they are finely crushed; the next matter is, to be careful of the quality of the acid used: it should be the *oil of vitriol*, and not the chamber or brown acid, as it is sometimes called; oil of vitriol, when of the proper specific gravity, will weigh some fourteen drachms to the fluid ounce. By this test, perfectly simple, any one can avoid imposition by unscrupulous dealers. I have got my acid of J. Irvin Smith, Druggist, Bowly's Wharf, Balt., who has always dealt with me in good faith. It has cost me from two and a-half to three cents in Baltimore, with the privilege of returning the carboy at the price charged me.

THOS. SIM.

On the Transmutation of Seeds.

To the Editors of the American Farmer:

In your December number, Mr. R. Rouzee asks some explanation of things which appear to differ from the laws of nature. The first subject has been ably discussed, and at much length in the old series of the American Farmer, but I would remark, it is worth while to observe the whole chess plant—leaves are hairy—wheat without hairs, stalk nearly solid in the chess—wheat a mere shell—flowers different, &c. The mistletoe is a parasitical plant, and the reason such trees as the oak, gum, maple, &c., are its localities, is because of their rough bark forming a hold for the seeds carried by birds from the old plants, for the mistletoe flowers and ripens its fruit as regularly as black gum itself. I have frequently had them both in my hands, and now have in my possession both flowers and fruit. It flowers in April and May. As another example the dodder (cuscuta Americana, *Linn.*) may be mentioned, as quite remarkable, it grows from the ground as an orange yellow vine, and fastens itself upon grass, weeds, &c., twining around them from right to left, and then withers away at the root, depending upon the plants, around which it fixes itself, for nourishment. This class of plants is numerous, and indeed, we find some even among *mankind*.

The appearance of small grains of corn among the tassel I have frequently observed, but have always found them upon the suckers or sprouts from the real stalk of corn, and even some kinds of corn will produce ears on these suckers; but my corn always produces the grains on the tassel, in case a sprout is left, and sometimes on each branch from the main stem of the tassel—forming a beautiful appearance when in full bloom.

It is not at all remarkable that these grains should bring ears; but why the suckers should be governed by this law, I cannot say; but such is the fact, and I have never observed any other stalks have corn on the tassel—though the sprouts are frequently found, having obtained a number this fall.

R. S. H.

Woodville, Harford Co., Md.

The *Baltimore American*, and the *Baltimore Patriot*, two of the best papers in the country, will hereafter be published on the cash system, at $6 per annum, for the daily, and $4 for the tri-weekly—in the City at 12½ cents per week, payable to the carriers.

BALTIMORE MARKET.—DEC. 27.

Flour, Howard st., Ohio and City Mills $6.50; family and extra flour $6.87a7.25. Rye Flour, $5a5.12; Corn Meal, city, $3.50, country do. $3. The receipts of grain have been light during the week, and the demand has been brisk, and shippers would have purchased liberally, if they could have been supplied. 38 to 40,000 bushels wheat were shipped to England during the week, and 15,000 bushels corn to England and the West Indies.—Wheat, white, $1.56a1.58; for fair, $1.60a1.65 for good to prime parcels; red do. $1.46a1.49 for good to prime lots. Corn, new, 57a58c. for white; 60a62c. for yellow; old, 63c. for white, and 63a64c. for yellow. Rye, Pa. 80c; Md. 70c. Oats, 45a48c. for fair quality; 50c. for prime. Guano, no change in prices, and but little doing at this season. Hay, scarce, and in demand, prime baled $21a22 per ton, loose $20a21; Straw, $15a16 for rye, and $10a12 for wheat. Molasses, N. O. 75a80 for new, and 63a65 for old. Porto Rico and Eng. Island do. 52a58. Spirits Turpentine, 43a45. Tar, $1 75; Pitch, $2, and Rosin, common, $1.60 per bbl. Clover Seed, $7.75a8; Timothy Seed, $3a3.50, and for Flaxseed, $1.80a1.85. Plaster, $3 per ton for lump, and $1.25a1.37 for ground per bbl.

The Provision market shows a good demand, and prices well sustained. Rice, 4¼ a 4½ for fair to good lots. Sugar, sales light, and prices high; P. Rico $9.50 a 11, Cuba and English Island $9.50 a 10.50. Tobacco, continues in active demand for Md. of all descriptions, but the receipts are light; Md. crop and ground would sell readily if here: the latter at $6 a 10; crop inferior, short seconds $6, com. 6.50 a 7.50, mid. to brown $8, brown leafy 8.50 a 10, and extra 11 a 15: Ohio is also in demand, but receipts trifling. Wool, a fair inquiry, but little coming in; unwashed 26 a 27, pulled 30 a 31, quarter blood fleece 33 a 38, half do. 37 a 40, ¾ do. 40 a 44, full blood 45 a 50, and ex. Saxony 55c. Whiskey, Ohio and city, 28c.

BONES, vs. GUANO.

Under this heading, the New York Times makes some suggestions, which we deem worthy of transferring to our pages, believing as we do, the truthfulness of the conclusions at which the writer has arrived, so far as Peruvian Guano is concerned.—We have heard from what we deem good authority, that the Agent in this city has intimated the probability that the article will more likely be advanced to $70 per ton, than reduced below the present price, thus probably verifying the anticipations of the Times, but earlier than the Editor imagined. We again call upon our agricultural friends to give us the result of their experiments during the past year, with the various kinds of manures used by them, with such suggestions as they may deem advisable, for the guidance of their brother farmers. This is the only way that spurious or worthless articles can be discarded, and really scientific and honorable manufacturers can be sustained. Farmers and planters owe it to themselves and their brethren, that they should thus give their experience, without fear or partiality. Let them do *their* duty, and they will find that *we* will not shrink from the performance of ours.

We have heard of a number of instances of the excellent effects of the Colombian Guano during the past year. A relative of Dr. Stewart of K. George Co., Va., informs us that during a visit to Dr. S.'s last summer, he noticed that the effects on the corn by this guano was extraordinary—and Mr. W. B. Dorsey, of Howard Co., informs us that his wheat manured with Colombian, is fully equal in appearance to that upon which he had applied the Peruvian. We would be obliged to these gentlemen, and all others who have tried this guano, or any other varieties, as well as the various super phosphates tried by them; likewise the comparative effects of ashes, bone dust, &c. &c.—to give us the results of their trials. As far as possible, state also the character of their soil, the mode of application, and other particulars, the communication of which will no doubt be the means of saving many a dollar to their brethren, the present year. Let not the usual objection be made, of inability or indisposition to write for the press—all that is required is a simple statement of facts, which need no rhetorical adornment, but details such as they would communicate orally to a neighbor or friend.

But we have deviated from our purpose when we commenced writing, which was simply to call attention to the following from the "*Times*":

"Until the supply of home-made or barn-yard manure is exhausted, we would not advise any one to go beyond the farm to purchase any kind of fertilizer whatever, unless it be gypsum, (plaster of Paris) where this has been found beneficial, or where it has been untried, and *lime*, to apply to cold, sour soils, or to those abounding in undecayed roots and other organic matters. But when the home manures are all used to the best advantage, most farmers will have still remaining one to a dozen fields, that may be profitably treated with a dose of some kind of fertilizer brought from abroad.

No other question connected with agriculture is half so frequently asked us as this:—What manure would you advise me to purchase? Since the thorough and successful trials of good Peruvian Guano have proved its high and almost universal value, as a fertilizer on nearly all kinds of soils and crops, we have in most cases recommended the use of this, in preference to all other foreign manures; and *when it can be obtained at a reasonable price*, we still think it the safest and the best, all things considered. But there is a limit to its profitable use, and those who chance to have a monopoly of the article seem determined to reach that limit. It will be well for them, for farmers and for the country if they do not go beyond. The last straw broke the camel's back, and we are inclined to think the agents of the Peruvian government, by a continual increase in the price of guano, have very nearly, if not quite, put upon their own backs the last straw.

The constantly varying price, and the imperfect arrangements for shipping regular supplies, have been and are the cause of much dissatisfaction among consumers. Just at this time the agents have little or none to sell at any price. The excuse that shipping is not available will hardly pass. The supply of an article that pays the owners so large a profit, and which has been depended upon by so large a number of persons, should not be left to the chance ships that may find it convenient to visit the Chincha Islands.

A reaction is already taking place among intelligent cultivators, and when the tide has once fully set backward, it will not be so easy a matter to stay its course. Those who have patiently experimented with guano at 2½ cents a pound, until they have concluded that at that price it will pay, will not at once conclude that this will be the case when, as now, they cannot get it for less than 3 cents per pound, or an advance of 20 per cent. Some will continue its use, while a multitude of others will become irritated and disgusted with what they consider an imposition practiced upon them, and they will be quite likely to ignore the use of the article altogether. These hints are thrown out in all kindness to the Peruvian Agents. We do not know what are their present intentions in regard to this matter, but if we are to judge from the past, we may look for another advance of 20 per cent. in the price of guano during the next year or two. If such should be the case, and even if there be not a partial receding from the present prices, and a steady supply furnished, our advice to farmers will be, look out for yourselves, and let Peru do the same.

We are glad to see public attention turned to other sources for materials to resuscitate our impoverished soils. A large manufacturer of superphosphates, combined with ammonia from our gas works and other sources, informs us that his orders this year, are increased four-fold over those of former years, and that the rise in the price of guano, and its irregular supply have made *his* fortune.—His orders are mainly from those who have heretofore relied upon guano. Almost every week we hear of some new factory started to manufacture

artificial fertilizers, and companies are formed, and being formed, to explore the Islands of the Pacific in search of new deposits of guano as yet *unmortgaged* and unmonoplized.

But thus much by the way. We commenced this article to call the attention of farmers to one or more substitutes for guano. In our own experience, as well as observation, we have found no so good substitute as finely ground *unburned* bones. Unfortunately, the supply of this material is not unlimited, nor indeed considerable, but so far as it goes it is worth looking after. We recently saw a hundred or more barrels of fine bone sawings lying without a purchaser, though offered at $3 to 3.50 per barrel of 250 to 300 lbs. or but little above one cent per pound. And yet chemical analysis, as well as experiment, shows that this article strongly resembles guano, both in its composition and in its effect upon crops. The large amount of organic matter in *unburned* bones, which decomposes readily when they are finely pulverized, furnishes an excellent stimulant or nourisher to most growing plants. It is a safe application, as there is none of that causticity found in guano.

Where immediate benefit is desired, it is important that the bones be *finely ground*. Whole bones will lie in the soil for years without being entirely decomposed, and when crushed to the size of peas, it will often be two or three years before their full effect is realized. Where a large application of bones is to be made, as in grape borders, in gardens, &c., the coarsely pulverized are preferable, as in this case they will afford a sufficient nourishment for present use, and continue longer operative."

ENTRIES AT THE LATE CATTLE SHOW
OF THE
Maryland State Agricultural Society.

HORSES.

Thorough Bred, or Blooded.—By O. Bowie & F. M. Hall, Prince George's, Stallion Basil, 7 years old, Mares Fidelity, 12 years, and Annabella, 14 years old; Fillies Bride, 2 years old, and Fanny Flyer, 1 to 2 years old. By J. A. Hamilton, Stallion Dandolo, and Mare Fashion, 11 years, with colt. By T. H. Burgess, of Kent Co., Stallions Bustamente, 19 years, and Aimwell, 7 years old. By Henry Frailey, of Frederick Co., Md., Stallion Young Beverly, 8 years old. By Phillip T. Simmons, of Kent Co., Stallion Childe Harold, 5 years old. By Arthur Johns, of Cecil Co., Sam Clinker, 6 years old. By J .W. Ware, of Clarke Co., Va., Stallions Cosmo, 7 years, and Gonzales, 4 years, Mares Gazelle, 5 years, Vista, 6 years, and Decca, 3 years, and colt Maygo, 2 years old. By Mr. Scarff, of Harford, Stallion Fothinn, 9 years old.

Quick Draft and Saddle.—By Jno. W. Randolph, of Baltimore Co., Nelly, a 3 year old Filly. By Lewis Brown, Baltimore Co, Black Hawk and Trafalgar, 6 years old, Mare Fanny Forrester, 8 years old, and her colt, 5 months old. By Jno. Williams, of Baltimore, Morgan Black Hawk, 7 years, Stockbridge Chief, 4 years. By Jas. H. Murray, of Anne Arundel Co., Oscar, 8 years old, Dora, 6 years old, and Aram, 1 year old. By Nich. Hutchins, Baltimore Co., Nat, 5 years old. By Wm. Scharf, of Harford Co., Southern, 9 years old, and Fanny Fern, 5 years old. By Jno. Green, Baltimore, White Hall, 3 years old. By W. P. Houser, Baltimore, Vermont, 6 years old, Kate, 7 years old, and Tom Brown, 5 years old. By T. B. Wills, of Baltimore city, Trustee, 6 years old. By T. H. Burgess, Kent Co., Ashland, 7 years old. By A D. Brown, of Baltimore Co., White Hall, 4 years, and colt Brookland, 1 year old. By Henry Frailey, of Frederick Co., Canadian, Messenger, and Jim Crow, 4 years old, and Ball Hornet, and Tom Friendship, 5 years old. By A. Dodge, of D. C., Bosquet, 5 years old, half Arabian. By B. Standiford, Harford Co., Rob Roy, 4 years old. By J. Blackway, Cecil Co., Jno. Ney, 7 years old. By Jno. Merryman, Black Maria, 9 years old, Emma, 3 years, Star, 2 years, and Fanny, 5 years old. By Isaiah Mercer, Ellicott's Mills, Sallie White Stocking, 5 years old. By Henry Carroll, jr., Baltimore Co., Fanny, 8 years old, and Maryland, 6 months old. By Jacob Shunk, York, Pa, Fly, 7 months old. By W. F. Murdock, Dolly, 10 years, and colt, and Colin, 2 years old. By Richard Thomas, of Talbot, Fanny, 11 years old. By Jas. T. Earle, Lady Baltimore, 6 years old, and Leipsic, 2 months old. By R. Evans, Howard Co., Herod, 15 years old. By T. T. Nelson, Baltimore Co., Vermont, 8 years old. By J. Van Meter, of Va., Dey of Algiers, 5 years old. By B. P. Hendrix, York & Doll, 4 years. By J. N. Henderson, Baltimore Co., Genius, 16 years old. By Edwin Hardy, Baltimore, matched Horses, North and South, 6 years old. By Dr. A. Heuet, Baltimore, pair of matched Horses, Arab and Tartar, 4½ years old. By Fell & Patterson, Baltimore Co., a pair of matched Horses, 4 and 6 years old. By B. M. Cents, of Cecil Co., pair matched, Archy and Davy Crockett, 6 years. By Arthur Johns of Cecil, pair, Billy Brown and Billy Bellfounder, 6 years old. By Jas. N. Goldsborough, of Talbot, a pair of sorrel matched Horses. By P. Snyder, 1 pair grey Mares, 2 years old By A. Rutledge, 1 pair b. Horses. By Jno. Royston, Baltimore Co., Brood Mare Nelly. By H. Ives, of Baltimore, Mare Mountain Main, 6 years old.

Single harness Horses, Mares or Geldings.—By Geo. Robinson, Mare Fannie, 6 years. By Jas. Price, Miller's Boy, 6 years. By A. H. Mann, of Baltimore, Andrew Jackson, 7 years, and Kate Clark, 8 years old. By C. Ridgely of H., Trueman, 6 years. By W. Humphries, of Baltimore, Sutton, 7 years. By W. C. Taylor, of Va., Nannie Bell, 4 years. By Thos. Stockham, of Harford, Tom Taylor, 4 years. By Isaac Amos, of Harford, Dan Webster, 4 years, and Doll, 8 years. By M. Pfeltz, Baltimore, Young Herod, 3 years. S. T. Lee, of Baltimore, Addie, 6 years, Know Nothing, 5 years. By Wm G. Burke, of Harford, Henry Clay, 9 years, and Fanny Esler, 7 years. By Geo. Lanche, of Baltimore, Young Eclipse, 6 years. By Martin Quinn, of York, Pennsylvania, Prince, 4 years, and Kate, 7 years. By E. S. Troxell, of Waynesboro', Pennsylvania, Jack, 7 years. By J. Birely. Baltimore Co., Sleeping Dinah, 7 years. By Geo. A. Brown, Baltimore, Bob, 4 years. By O. Smith, of Baltimore, Fanny, 5 years. By J. B. Dillahey, Baltimore, Black Maria, 5 years. By A. Johns, Cecil Co., Tom Bug, 6 years. By Jno. Needles, Baltimore, Jewel, 6 years. By W. T. Hardesty, of Easton, Bell, 7 yrs.

Saddle Horses, Mares or Geldings.—By A. H. Mann, Baltimore, Buck, 6 years old. By J. B. Armstrong, Howard Co., Tom, 5 years. By F. M. Sparks, Baltimore Co., Chester, 7 years. By Henry Devries, of Maryland, Lady Jane, 4 years.

By A. H. Mann, of Baltimore, Mary Jones, 6 years. By B. M. Crawford, Cecil Morgan, 10 years. By C. H. Cole, Baltimore Co., Barney, 6 years. By Dr. Greentree, Baltimore Co., Ida, 5 years.

Three year old Colts or Filleys.—By G. W. Robinson, Florence, a Trustee Colt. By Isaiah Mercer, Howard Co., Sebastopol. C. Ridgely of H., Otello. By Silas W. Conn, Baltimore Co., Vermont, jr. By H. Humphries, of Baltimore, Henry Clay. By T. L. Keene, of Harford, Jim and Jack. By Dr. G. C. Ogle, of Prince George's, Bel Air. By Henry Devries, of Maryland, Young Messenger. By W. T. Miller, Kent Co., King Philip. By G. W. Christfield, of Kent, Jenney. By W. T. Hardesty, of Talbot, Independent. By T. Wright, of Dorchester, name not recorded. By G. M. Eldridge, of Cecil, Romeo. By J. N. Goldsborough, Sebastopol and Volant.

Two year old Colts or Filleys—By C. Ridgely of H., Guy. By A. C. Scott, of Baltimore Co., Mayfly. By W. O. Wilson, of Baltimore Co., Sallie. By A. Ryder, of Baltimore Co., Zinganee. By G. W. Lurman, of Baltimore, Jim Crow. By Jacob Schancke, York, Pennsylvania, Fox. By V. W. Baseman, Baltimore Co., Tom. By J. S. Crockett, Somerset Co., Somerset Morgan. By J. Walters, John Snap. By J. C. Turbin, Ticonderoga, jr. By Mr. Dawson, Black Hawk.

Colts or Filleys, under 2 years old.—By Mr. Jackson, Baltimore Co., Lady Alice, 18 months. By E. C. Greevemeyer, York Co., Pennsylvania, Lady, 12 months. By A. C. Free, York Co., Pennsylvania, Prince, 12 months. By W. S. Turpin, of Queen Ann's Co., Hunter, 12 months. By Dr. Tappin, Madison Hunter. By F. Felton, of Baltimore Co., Tippo.

Heavy Draught.

Stallions.—By Jno. A. Langdon, Lancaster Co., Pennsylvania, Duke of Normandy, 5 years. By Jas. Sowes, Clarke Co., Va., Morgan, 7 years. By F. B. Groff, of Baltimore Co., Geo. Ranter, 4 years. By Jno. Bireley, of Baltimore Co., Norman Messenger, 8 years. By David Ripe, Berkeley Co., Va., Peacock, 6½ years. By Jos. Boyers, Lancaster, Napoleon, 7 years. *Brood Mares*—by E. C. Greevemeyer, York Co., Pennsylvania, Fanny, 9 years. By G. Y. Worthington, Kate, 6 years, and colt. By Jacob Shunk, of York, Fly, 7 years old. *Matched Horses*—by J. N. Henderson, Dave and Choptiko, 8 and 4 years. *Two year old Colts and Filleys*—by Jno W. Randolph, Balt. Co., Colt, Prince. By Wm. Mathews, Baltimore Co., a 2 years old. By A. Scott, of Baltimore Co., Lady. By J. N. Henderson, of Baltimore Co., Shelah. *Three year old Colts*—by S. W. Conn, Leon. By Edward Scott, Baltimore Co., Beck Valentine. *Team of Horses*—by Wm. Matthews, Baltimore Co.

JACKS AND MULES.

By Jno. D. Linton, of Baltimore Co , Jack Valparaiso, 6 years old. By G. W. Pillson, of Baltimore Co., Jack Tom, 5 years, and by W. T. Hardesty, of Easton, Jack Commodore, 8 years. By R. J. Worthington, of Baltimore Co., a team of 6 mules.

[TO BE CONTINUED.]

Death of Black Hawk.—The far-famed trotting horse, "Vermont Black Hawk," died on Monday morning, at the stable of his owner, David Hill, Esq., Bridgeport, Vermont. He was twenty-three years old.

EXHAUSTING THE SOIL.

Is it not a singular fact, that in some of the old States we have had immense tracts of land, thrown out of cultivation, as having become exhausted of the soil, whilst in the old countries of Europe, which have been in cultivation for centuries, the reverse is the case! The soil of Europe, says a traveller, is now better than ever—and the reason he assigns, is the plentiful supply of manures, and manures made upon the best possible system, by which the soil is receiving more back than is taken away in products.

"Of all farm products, (says Mr. Chas. Remelin, in the Ohio Farmer) the atmosphere and rains furnish the larger quantities of its component parts, and whenever a proper system of manuring exists, the ground must become constantly enriched.

"In Europe, manure is the ever-present idea of the farmer, and by gathering all offals, and making manure in any conceivable way, he does not only by green manuring, such as ploughing clover under, but by stable, factory, street, and dwelling manure, take good care to return to mother earth the rental she requires, and to do it without grudging and with compound interest. Soil is only there exhausted where crops are raised which are entirely removed, and of which nothing is returned to the soil—for instance, tobacco. This is very little the case in Europe. The fine wheat crops, which smile upon the traveler, as he is rushed past them by railroad speed, would be an impossibility, if the idea of exhaustion were true. The meadows, too, which are mown thrice every year, and each time give a good crop, have been mown for ages, contradict this exhaustion theory. No! the European farmer, and his land, are always on good terms with each other. The man yields good husbandry, and the land yields good crops."

The Japan Pea.—A correspondent of the N. Y. *Tribune*, writing from Chester county, says:

Sir: The extensive circulation of your paper makes me desirous of calling, through it, the attention of agriculturists and others to the merits of the Japan Pea, or *Cojanus bicolor*. It is a native of East Indies and Japan, and has had but a limited trial among agriculturists here yet, but still enough to demonstrate its perfect adaptation to our climate and soil, its great productiveness, its excellence and wholesomeness as an article of diet, and its easiness of cultivation. I have sold all that I have raised the present season at $4.50 per bushel, and think they have been more profitable than three crops of Indian corn.

They may be planted about the same time as corn, are well adapted to field culture in rows two or three feet apart, and about a foot apart in the rows; they do not require a very rich soil, and forming a stiff bushy stem they need no poles to support them. They are also free from bug, so common among peas, and are fit for house use all the year round: they appear well adapted for ship's stores, for which they are used by nations that cultivate them, and I would recommend a trial of them for the use of the military and naval departments of the government, as occupying much nutriment in a small space and requiring no other preparation for cooking than soaking about twenty-four hours in cold water.

[Some of these peas can be had at the *Farmer* office.]

AMERICAN FARMER.

Baltimore, January 1, 1857.

TERMS OF THE AMERICAN FARMER.

Per Annum, $1 in advance—6 copies for $5—13 copies for $10—30 copies for $20.

ADVERTISEMENTS.—For 1 square of 8 lines, for each insertion, $1—1 square per annum, $10—larger advertisements in proportion—for a page, $100 per annum; a single insertion, $15, and $12 50 for each subsequent insertion, not exceeding five. Address,

S. SANDS & WORTHINGTON,
Publishers of the "American Farmer,"

At the *State Agricultural Society's Rooms*, 128 Baltimore-st.
Over the "American Office," 5th door from North-st.

TO OUR SUBSCRIBERS IN ARREARS.

In accordance with the notice given in our last, we enclose in the present No. of the *American Farmer*, a printed bill of the indebtedness of those subscribers who may not have paid their dues for the present volume, or previous thereto, as well as to those whose subscriptions commence with the new year. We feel truly grateful for the general promptness of our friends, still in so large a circulation and scattered over so vast a district of our country as they are, a considerable number, through negligence or forgetfulness, lose sight of the fact, that our terms require payment in advance: and altho' we do not insist on a strict adherence to the rule, still we think that when six months of the year have expired, we have a right to expect that those who have thus far failed to comply with them, will forthwith forward the amount due; and conscious as we are that we have rendered value received for the trifle required of each reader, may we not expect that the hint now given, will be promptly responded to?

Our expenses have been largely increased during the past year, in the publication, but still we can be fully remunerated by a prompt settlement on the part of those for whom we toil.

We have the testimony of many of our oldest patrons, of our zeal and the unflinching efforts we have made on every suitable occasion, in support of the agricultural interests of our country,—and as one of the evidences of this, we take the liberty of publishing the following letter received from a gentleman, who, like our journal, has been one of the pioneers in the cause of agricultural improvement in this country, and who has been an ardent and true friend to our work, and to its senior conductor, for near a quarter of a century:

From JAMES GOWEN, ESQ., *President of the Pa. State Agricultural Society.*

MOUNT AIRY, Nov. 28th, 1856.

S. SANDS, ESQ.

Dear Sir:—The time for renewal of subscription to the American Farmer is at hand, and I take occasion to enclose you five dollars to be placed to my credit for the ensuing year *only*. Believe me when I say, that for several years past, as I paid my one dollar annually for your most valuable paper, I felt, it being within my means to do a little more, that I had not fully discharged my duty in not rewarding you better for the long and faithful services you had rendered to the cause of Agriculture, in which I was so deeply interested. It may gratify you to hear that the same appreciation of your merits is entertained by every subscriber to the American Farmer, with whom I have conversed—all acknowledge your worthiness and fidelity. This is flattering, and well enough as far as it goes, but with those who are engaged in Agriculture and its promotion, and who have a little to spare—and how many hundreds, I might say thousands, among your readers are happily so circumstanced, five dollars to the next year's subscription to the "Farmer," by way of New Years' gift, would be but a trifle to each, while in the aggregate it would be important to you, and enable you to keep on your independent course with renewed spirit and increased usefulness, under a sense that you had not labored in vain, nor unrequited.

With much respect and esteem,

I am, very sincerely yours,

JAMES GOWEN.

Whatever other virtues we may lack, *gratitude* is not one of them—and in tendering our heartfelt thanks to our too partial friend, we must be permitted to say, that we feel proud of the testimonial thus afforded us, from one so eminent and so devoted as is the writer, in the noble cause in which we are engaged—but at the same time we must beg most respectfully but decisively to decline the gratuity proposed, as we will feel fully compensated for our labors by a prompt response on the part of those who are indebted to us, to the appeal we have made above. Those who may be disposed to evince their kind feeling towards us and our paper, can perhaps at the same time perform a good work to their neighbors, and increase the prosperity of their neighborhood, by using their efforts to extend the circulation of our journal. All such efforts will be duly appreciated on our part, and will enable us the more advantageously to cater for the benefit of our friends and the public. There are few whose influence is not sufficient to add one or more names to our list.

Our City Subscribers will, as usual, be waited on in January for their subscriptions—those disposed to save us the commissions for collecting, can do so by sending the amount of their dues to our office.

AGENTS FOR THE FARMER.

In addition to others heretofore announced, the following gentlemen will act as Agents for the *American Farmer*, in their respective neighborhoods, viz:

W. A. KEARNEY, Warrenton, N. C.
W. F. HAMPTON, Dresden, Tenn.
J. V. CRUTZ, Curdsville, Va.
WM. HOLMAN, Cartersville, Va.
WM. MASSENBURG, P. M., Hampton Va.

CONSIDERATIONS FOR THE WINTER.

He who thinks that the agriculturist, through the winter months, has but little to do on his farm, is most egregiously mistaken; for if he be true to his interests, there is no season of the year when there are more important calls upon his time, and especially at the commencement of a new year, when besides the current business of the period he should be arranging and digesting his plans of operation for the coming season, in order that when the spring shall open, he may not be found unprepared to proceed with energy and judgment. And as this is the beginning of a new year, we would respectfully ask attention to the following points of duty.

1. As far as may be practicable during this month, digest and lay down your system of cropping for the next season.

2. Commence the year with a firm and resolute determination to economise time and give a close attention, an assiduous personal supervision to all the operations on your farm as they may be proceeding—see to it, that your work of every kind, particularly the preparation of your land for crops, are performed at the right time, as near as the seasons will permit, and that they be well and faithfully executed; for without such personal supervision, the chances are against work being well done.

3. So regulate all the operations of your farming, as far as may be practicable, as that no unnecessary delays, no unavoidable procrastinations, shall occur; never delay the labor that should be done one day to a future one, as all such postponements are injurious, and when long continued often prove fatal to success

4. Have all your lands that are not *wet*, ploughed faithfully and deeply, and be sure that whatever lands you may have ploughed, are thoroughly pulverised by means of the roller and harrow; see to it, that the processes of rolling and harrowing are executed before the soil has time to dry after being ploughed.

5. Keep the implements and tools on your farm at all times in good repair, so that they may be ready for use when wanted; keep them in their proper places, and when not in use, in a house under cover to protect them from the weather.

6. If you have not already provided such accommodations, have stabling and shedding erected for all your stock of every kind and denomination, and personally see that they neither suffer from the elements nor from want of food.

7. Keep a journal of all your operations; have the work to be performed from time to time written down therein for at least a week ahead.

8. Keep a regular account of all your expenditures and receipts: keep an account against each field, in order that you may know whether you are farming to advantage or not.

FERTILIZING CROPS.

Practical farmers should turn their attention, and give their thoughts more to the subject of fertilizing crops. We want more of such crops, and we want such as can be readily adapted to our established systems, and will conveniently alternate with our money crops. We arrange our plan of cultivation and require our lands to yield us certain crops of corn, and wheat, and tobacco, or cotton, in so many years, and are not willing to forego the anticipated returns, nor is it by any means a desirable thing of itself, or convenient or suitable to change frequently from one system to another. It is very much to be desired therefore, that these secondary crops be thrown in as intermediate, between the more important money crops, and occupy as much as possible the time which would otherwise be lost. They should in connection with the other crops keep the ground constantly occupied with living, growing plants. They should save the wasted time between wheat harvest and the succeeding crop—a waste of nine months after a fallow crop which is seeded with no grass seeds. They should save the interval after the corn crop has ceased growing, until some other crop is put in, if possible. They should with a wise economy, gather all the fragments of time, and instead of allowing noxious weeds, which harbor insects, and scatter the seeds of future trouble, they should posess the land as conservators and benefactors. Nothing, certainly, so much prevents the frequent use of such crops, as their breaking in upon established arrangements, and for this reason it is, especially, that we ask the attention of intelligent farmers familiar with the details of our ordinary cultivation, that we may add to our stock of improving crops, and adapt them more readily to our practice.

While the cultivation of the field pea is rapidly increasing on our repeated and earnest recommendation, the objection is made that it is proposed to sow it in the spring or summer following the corn crop of a previous year, and that it consumes a whole year of the rotation. The objection, though by no means commensurate with the value of the crop, and should not exclude it, is a serious one. South of us where their longer autumn season allows more time for maturing the crop, and when it is sown at the last working of the corn, the adoption of the crop has been much more ready. While some cultivators make great objection to the injury done to the corn crop, others as confidently assert, that owing to difference in the character of the plants, and to the probability that while the corn crop is at its most vigorous growth, the feeble roots of the young pea have no power to interfere with it, it does the corn crop no serious injury. It matures after the corn has ceased its growth, and the longer season for seeding renders its use as a fallow crop for wheat practicable, and, perhaps, expedient.

The expediency, we doubt, however, except on land in good heart, and otherwise peculiarly adapted to the growth of wheat. But the saving of time and of labor by this method are important items.

Let us make now the suggestion which we have heretofore made of careful experiments, as to another method of applying this crop. The writer has two different seasons made satisfactory trials of the pea by sowing it with oats—putting all together in the ground at one operation. The pea has not interfered with the crop of oats, but has taken possession of the ground after harvest, to the exclusion of "rag-weed," and others more objectionable. Such a result would be invaluable if well established where the system now in use follows corn with oats, and the crop of oats with wheat. There would be no loss of a crop, no loss of time in the rotation, and no extra labor. It would be a perfect adaptation of this ameliorator to the existing arrangement. It is well worth while, too, to make the experiment on fallow wheat. We shall give it a fair trial the coming spring, and would like to have others do it. It need be done only on a small scale for trial. Sow the seed and harrow and roll in the spring, as is done for clover seed. Who can estimate the value of such a substitute for rag-weed on all the fallow fields of Maryland, and the States south of her.

Another crop with which we would have experiments made, with the end in view, is the turnip. That this crop, which is the foundation of the agricultural prosperity of England and Scotland, should be of scarcely any value in our own practice, is, to say the least, remarkable. We have an impression that it is likely to meet our requirements as a fertilizer on almost all points. The seed is cheap—every farmer is familiar with the method of raising it, and can supply himself at a cost that will not exceed fifty cents for an acre. It occupies a short time in its growth, and grows entirely after our own small grain crops come off, and mostly after the corn crop ceases to grow. It grows till hard frost, and some varieties live through our hardest winters, and throw up their seed stems in very early spring. A roller passed over them would destroy their vitality, and left to rot in the ground in fall or spring, would prove, we believe, a very enriching manure. We saw their value accidentally tested the past season. Some rotted ruta bagas were thrown out upon the ground, which was planted in a summer crop, and the effect upon that, and the crop of wheat now on the land, is just like what those who use guano are familiar with, where an excessive quantity is wasted upon the ground in taking it from the bags as they sit about the field. It remains to be seen, and it is well worth the trial, what degree of preparation of the ground is necessary when the wheat has just been taken off, to give us this advantage of this crop. One of the improved cultivators, drawn by two horses, which do the work of four or five ploughs, might with great expedition put the ground in order. The seed may be sown with corn at the last working of that crop.

Rye is another crop which may be conveniently and advantageously used. It can be sown at any time from mid-summer, and attains its greatest growth in time to be plowed under for late corn, and for potatoes, tobacco and other crops.

And let it be borne in mind, as an inducement to the more frequent introduction of such crops, that they may be used, when required, as most valuable aids in the support of stock. An early sown rye-pasture is fit for stock, and makes excellent pasture, at least a month before the clover should be turned upon. The turnip may be gathered to any extent, and we know that the ruta baga will maintain oxen at hard work in good condition; that hogs may be wintered to great extent, and sheep fattened on them, and the pea is a most nutritious and fattening food.

We make these suggestions for experiment, and not for practice without trial. Farmers can make their lands more productive by following the example of gardeners who keep up a constant succession of useful plants. It is a subject worthy of the consideration of reflecting men, and we commend it to their attention.

Sales of Premium and other Animals.

Mr. John Merryman, of Hayfields, Baltimore Co. has recently sold his Ayrshire Bulls, "Highlander" and "Mar." The former to Prof. N. R. Smith, of this city, and the latter to Mr. John B. Crenshaw, of Richmond, Va. Both of these animals carried first prizes, at the late Exhibition of the United States Agricultural Society, in Philadelphia.

Mr. Clement Hill, of Prince George's, has sold his Cow Cherry, and heifer Tilly, advertised in the last Farmer—the latter to Dr. Henry Ridgely, of Dover, Del. who has also purchased from Wm. C. Wilson, Esq., of this city, one of his fine Alderney Cows, and a young Bull of same breed. Mr. Hill has also sold his premium young Bull Breck, to William S. Battle, Esq., of Rocky Mount, N. C.

Mr. S. T. C. Brown, of Carroll Co., his premium bull, sent to Charleston, S. C. and a young bull 6 months old to same place.

Mr. Geo. Patterson has shipped through us since the last Show, four of his Devon heifer Calves, and a bull Calf—all about 6 months old. These animals are purchased for Col. Sumner, Editor of the South Carolina Agriculturist, for himself and others in that State, and will do credit to the herd of the gentleman from whom they were purchased.

Mr. C. Warns has sold a number of his premium Chester Hogs and their progeny, since the last Show.

SAFETY AND PROGRESS.

Passing recently through a Wheat field, the soil of which we knew to be of excellent quality, we found growing upon it, we think, about as much sorrel as wheat. The consequence will be probably much less than half a crop of what the owner intended to grow. Our previous observation of the same land enabled us to account for this unfriendly intrusion. Clover fields which have not been preceded by very clean cultivation, or for any other reason are not well set—are almost sure to be infested with sorrel. It was the case with this field, and the only proper preparation of such land for wheat would have been a deep and complete turning down of the sod, and thorough surface cultivation. The sorrel would have been smothered out and its remains served to improve the land. Instead of this, the ploughing was shallow and edge-wise—showing the turf at every seam. The air being thus admitted, the sorrel was not killed, and the surface working, dragged out the long roots and imbedded them in the mould where the wheat should have had exclusive possession.

The owner of this Farm is what a friend of the writer once aptly styled "a safe old fellow." "Your safe old fellows," he said, "don't believe in Agricultural papers and book farming." It is just so with this farmer—a prudent, hard-working, painstaking man—a man who meets his obligations, for he has few to meet—a safe man—very—for he never made a venture. Catch one of your safe men spending a dollar, unless he sees six per cent. at the end of the year in black and white. He won't go ahead, because it is safer to stand still. He won't think, because he has seen people get themselves into trouble by thinking. He won't read,—too many theories. He goes in for practice, and practice is all practice to him. He don't perceive that there is any difference between good and bad. When he succeeds, it is all good management; if he fails, it is good management still; but what can a man do with such wretched weather? Therefore, he is practical to the end of the chapter. What he makes is the work of his own hands—what he does not make, Providence forbids. Why should he not be satisfied? Let him rest *and rust*. If he does not walk, he will not fall. If he does not go on horse-back, he will never be thrown off. If he will not ride on a rail road, he will not be engaged in a "smash up." Our safe friend is astonished that people who know these facts, will walk, ride horses, or travel on rail roads. Yet a great many people do these things with apparent advantage to themselves. While a great many sensible tillers of the soil read the *American Farmer*, in safety—one of them to whom we told the facts above mentioned, suggests, that a careful reading of the several articles in the *American Farmer*, since last January, on clover culture and thorough working of the soil, would have *saved* this farmer in this one wheat crop, money enough to have paid his subscription for two hundred and fifty years! We think so too. Nevertheless, it must be allowed on the other hand, that as he did not subscribe last year, he has got his dollar *safe*, and preserves his reputation for a "safe old fellow."

HORSES, AND STABLES.

As humanity as well as interest calls upon all to keep their horses in good condition, it is the duty of all owners of such property, not only to *feed* them well, but to see that they *get* a liberal allowance of hay and grain daily; the latter is all the better of being chopt and mixed with cut hay or straw.—The horses should be fed three times a day, say, in the morning early, at noon, and before sundown; they should be curried, or carded, and brushed down morning and evening; watered thrice a day, and receive two or three times a week a portion of salt, say two ounces, or the same quantity of the salt, ashes and oyster-shell lime mixture. When not at work, they should be gently exercised every fair day.

The Stable should be cleaned night and morning, and be bedded at night with straw or leaves.

MARES IN FOAL.

These should be provided with a good warm shed or stable, facing the south, and have free access to a dry yard for exercise. Their food should be sufficiently liberal to keep them in good condition, *not fat*—and should consist of both grain and hay; they should be fed at least twice a day with grain in moderate quantities, and hay thrice a day; it should be recollected that, as they are carrying a young one, they should be given a sufficiency of food to preserve them from want, and to encourage the growth of the colt they have within them. As other horses they should be cleaned daily, bedded at night, be watered thrice a day, and be salted two or three times a week. Bear in mind that a mare with foal should never be kept in a state of ôbesity, but always in good condition.

COLTS.

Provide these with good warm sheds, facing the south, or south-east, opening into a dry-yard with a similar exposure. Take our word for it, that if you wish your colts to become good sized, well formed, well developed horses, you must feed them during winter with grain and good hay, so as to furnish them with the materials out of which to build up their frame-work. Half starving young animals, is the most unphilosophic, un-economical, and inhumane, policy ever pursued by an agriculturist. It is not necessary to keep colts positively fat, *but you should so feed them, as that they are always kept in good growing condition*:—Give them food enough to keep them in high spirits, and if

they be a little saucy so much the better. *All colts should be kept well, but especially during the first winter.* Stint a colt in food during the first year, and he will never make a first rate horse; stint him in food during the subsequent years of his coltship, and you run greater danger of so crippling the developments of his frame, as to despoil him of at least one-fifth his fair proportions. *Pure sand* will not produce vegetation; neither will a poorly fed colt ever make a first-rate horse. Attention must be paid to watering them thrice a day, and to salting them; and the use of the brush or a wisp of straw upon their bodies daily will be of service, besides rendering them more docile in disposition, they will be otherwise benefitted.

CATTLE—CATTLE SHEDS, AND YARDS.

Old and young Cattle should have separate yards. They should each be provided with warm, dry sheds, facing the south, opening into yards of similar exposure, the surface of which should have rough materials to convert into manure, at least 12 inches in depth, sloping to the centre, spread over them. These cattle should be fed thrice a day, watered as often, be salted thrice a week, and would be all the better of having good clean, warm bedding. Daily personal visits to your cattle yards, and especially at feeding times, will greatly tend to keep your cattle in order, as the *eyes of the master* materially contributes to their condition, no matter who may be entrusted with feeding them. Feeds of chopt grain at least once a day, mixed with cut straw, will be promotive of their spirit and health.

MILCH COWS.

We have often seized the occasion to plead for these generous creatures, and it affords us pleasure to know that we have not pleaded in vain. The success that has attended our exertions in their behalf, encourage us, in the beginning of a new year, to ask that attention be paid to them from this time till they are turned out in the spring to grass. In feeding them, besides hay or fodder, they should receive twice a day messes composed of chopt straw and roots, say, half a bushel of the former, and 1 peck of the latter chopt fine, moistened with water, or half a bushel of chopt straw or hay mixed with 1 gallon of corn-cob chop or meal, moistened with water. Thus fed, cows will yield good messes of rich milk, cream, and butter. Let their shed, or stable, be well bedded, and see to it that they are watered thrice a day and salted twice a week.

☞The communication on the preparation of Seed, &c., from the pen of Mr. Clemson, of this State, will, we have no doubt, attract unusual attention. We hope Mr. C. will follow up his experiments, and be induced to throw some *additional light* on the subject, as no doubt many of our readers would like to make experiments also.

CHINESE SUGAR CANE SEED.—We announced in our last that we had some of this seed for distribution. The demand for it exhausted our supply by the middle of the month, and we wrote to the Hon. Mr. Mason, Commissioner of Patents, enquiring if he could furnish us with an additional supply, to which he promptly replied as follows:

U. S. PATENT OFFICE, Dec. 16, 1856.

Sir—In reply to your note of the 15th instant, I have to inform you that we shall forward a supply of the Sorgho Sucre to each of the State Agricultural Societies of the Union. The amount of seed sent will be sufficient to plant sixteen acres; and each bundle will be accompanied by a printed circular, stating conditions, method of planting, &c. We shall forward to your Society in a few days.

Yours, very respectfully,
C. MASON, Commissioner.

To Samuel Sands, Esq., Sec'y Md. State Agricultural Society, Baltimore, Md.

The seed is hourly expected, and we will with pleasure supply those desirous of giving it a trial.

We will also receive from the gentleman who raised the seed for the Patent office, from seed imported from France, a lot of it for sale, which will be disposed of at $1 per quart, to those who may wish to go more largely into the culture than the package from the Patent office will afford.

WINTER PLOUGHING.

As there are many parts of the country in which our Journal circulates where winter ploughing can almost always be advantageously executed, and others where, under favorable circumstances of the season, it can be done at times, we advise all who have stiff clayey grounds that they intend for spring culture, to seize upon all occasions during winter, when the soil is not *wet*, to plough up such lands, to plough it as deep as the soil will admit, to lap the furrows When spring arrives, and the ground is sufficiently dry to be worked without danger of being poached by the horses' feet, to roll it with a heavy roller, and finish the pulverization, by harrowing lengthwise the furrows. The earlier the ploughing is done this month the greater will be the meliorating influence derived from the frost.

IMPROVEMENT OF "WORN-OUT LAND."

TARBORO', N. CAROLINA,
Dec. 15, 1856.

Messrs. Editors:—I judge from an article that appeared in one of the late numbers of the "Farmer" that you are somewhat puzzled at the success of our "peculiar" system of rotation, in growing cotton.

Will you believe me when I tell you? (I hope you will,) that there are hundreds of acres of land in this county, (Edgecomb,) originally poor, which produce from ten to twenty hundred pounds of cotton in the seed now, that fifteen years ago, produced not to exceed three hundred pounds.

The greater portion of this land has been planted in cotton, from ten to fifteen years, without rest or change. This improvement has been

brought about mainly by applying in the drill 500 bushels of earth, composted with from 30 to 40 bushels of cotton seed, for each acre.

Twenty years ago, the cotton raised in this county was worth about $50,000, now we make enough to sell for over half a million of dollars yearly.

Yours truly, "TAR RIVER."

We thank our friend for his attempt to satisfy our objections to a system upon which we commented recently, and for the interesting fact, as to the improvement and increased crops in his county. It gives us great pleasure to place these facts by the side of the improvements noted lately in Maryland and Virginia.

We have no difficulty in believing the facts he mentions, even apart from the credibility of our witness. But they do not bear so directly as he seems to suppose on the point in question. "Rotation" is not a matter of necessity but of economy. There is no evidence to show that with an ample supply of manures the same land will not produce forever the same crops. There is a theory which conflicts with the idea, but it is not established. But while it is not a necessity absolutely, tho' an economy always, it is a necessity in the absence of sufficient manures, and it is on this presumption we always speak of it—a deficiency of manures being a fact almost universal in our agriculture. In the cases mentioned by our friend, nothing we presume leaves the land but the lint itself. The stalk and the very enriching seed are all returned, and the annual addition of 500 bushels of rich earth is not only ample compensation for the comparatively small amount of matter sold, but in connection with thorough cultivation, accounts for the great increase of crop in land naturally good though apparently "worn out." The rotation on which we commented and which was recommended as an improvement on some other not mentioned, embraced cotton, corn and wheat in three successive years, and we objected to it on established principles *as a rotation*, without reference to manuring. Any rotation is tolerable with abundant manures, but the fact does not exclude the question, what rotation is the best? And in the general scarcity of manures it is a question of very great importance.

We speak above of lands "naturally good, though apparently worn out," and in an article in our last No., we say of what are known among us as "worn out lands," that they are usually we believe "rich in elements which unskilful workmen have packed away with the plow, beneath the few inches of surface soil." We had designed to follow the subject up with some views upon the condition of these lands, calculated as we hoped to attract the notice of observant men, and to correct some false impressions as to the method of treating them. We think that no men are more apt than farmers to be misled by false theories, especially those who claim to be very practical. The best hope for improvement in our methods of manuring and cultivation is in the intelligent observation of men whose minds, while they keep open to new views, are untrammelled by fashionable notions called science. We think there are a good many such notions floating about, and that sensible men are too easily impressed with them. We shall recur to the subject hereafter.

BOOK NOTICES.

ARCTIC EXPLORATIONS: THE SECOND GRINNELL EXPEDITION IN SEARCH OF SIR JOHN FRANKLIN, 1853–'54–'55. *By Elisha Kent Kane, M. D., U. S. N.*

We have received from the publishers, Messrs. Childs & Peterson, of Philadelphia, this narrative of Dr. Kane, in two volumes, of five hundred pages each, elegantly illustrated with 300 steel and wood engravings from sketches by the author.

This is a simple narrative of the every day life of the Arctic Explorers of the second Grinnell Expedition—what they saw, what they did, and what they endured—their extraordinary adventures and perils, and providential deliverances.—The interest with which we go along with the author is like that of a boy of ten when he gets into Robinson Crusoe, with the full faith that every word of it was written by 'Old Robin' himself. From the time he stepped on the deck of the "Advance," on the 30th May, 1853, till a day in September, 1855, when Captain Hartsteine hailed a little man in a ragged flannel shirt, "Is that Dr. Kane?" we are in full sympathy with the heroic adventurer. The glory of the book, however, is the light which its modest author could not hide; the spirit of the brave, gentle-hearted, true, Christian man, who was the life of the Expedition. It is refreshing to turn from the noisy men who bring reproach upon the Christian name by their loud professions and small doings, to a man like this, whose profession is only disclosed in such simple words as, "I read our usual prayers," "a trust based on experience as well as on promises, buoyed me up at the worst times;" but whose life in the most extraordinary trials, is the earnest, brave, patient, faithful *doing* of that which "his hand has found to do."

PATENT OFFICE REPORT.—We are indebted to Judge Mason, the Commissioner of Patents, and to Hon. J. Morrison Harris, of the House of Representatives, for copies of Patent Office Reports, for 1855, upon Agriculture. It embodies the report of D. J. Browne, Esq., upon seeds and cuttings distributed through the Patent Office; valuable essays by the same gentleman, on Domestic Animals, on Fertilisers, and deodorising the waste

matter of large cities; on Indian Corn and its export to Europe, and various other topics of agricultural interest. Also, a valuable essay of Townsend Glover, on "Insects frequenting the Cotton plant," with illustrations. There is also the usual amount of condensed correspondence from all sections of the country; commercial statistics, showing the amount and value of exports and imports, for 1855, &c. The volume is handsomely illustrated with colored engravings of Devon Cattle, and engravings of the Cashmere Goats of Col. Peters, of Georgia, of Insects, and other things.

ADDRESS delivered at the Fourth Session of the American Pomological Society, held in Rochester, N. Y., September, 1856, by Marshall P. Wilder, President of the Society. We are indebted to the author for a copy of this interesting and excellent address.

THE DOG AND THE GUN—A FEW LOOSE CHAPTERS ON SHOOTING—is the title of a little work we have received from C. M. Saxton & Co. Without professing to be *au fait* on this subject, we judge this to be a useful guide to those whose tastes lie in the direction the title indicates.

WE acknowledge the receipt from B. P. Johnson, Esq., Corresponding Secretary of the New York State Agricultural Society, of a volume of seven hundred pages of the Transactions of that Society for 1855. We promise ourselves a great deal of satisfaction in the valuable matter with which this collection seems to abound. The continuation of the valuable work of Dr. Fitch, on the Insects of New York; the practical essay of F. B. Gough, upon Climate; Mr. Howard's essay upon Grasses; the address of Gov. Wright, upon the same subject; the second part of Watson's "Practical Husbandry," devoted to stock husbandry, are some items of the large amount of good reading the volume contains. It is also well illustrated with portraits of cattle of improved breeds, and various places, diagrams, &c.

In a separate volume we have both 1st and 2nd Reports of Dr. Fitch, on the Insects of New York, with illustrations. Mr. Johnson has our thanks for copies of these excellent works.

THE SOUTHERN PLANTER.—The proprietors of this Journal intend to double the present size and price from and after the commencement of the present volume, beginning with this month. Should the plan be found acceptable to a majority of their subscribers, the second number will be issued in February—if otherwise, the change will be abandoned, and the next number will be issued in March. The growing importance of agriculture in the old middle and southern States, would seem to require more scope for its development than can be afforded in a monthly paper of the size of the Planter, and the Farmer. And we have frequently been urged by some of our warm-hearted friends to make an alteration in our publication, by which the desired object could be obtained—and we feel the necessity of at least a weekly journal, which we could most readily fill with matter that ought to be laid before the public—but our observation and experience has hitherto induced us to forego the desire of expansion in that direction, having good reason to fear that *it will not pay*. To accommodate a growing advertising custom, so as not to crowd upon our miscellaneous reading, we have added more than 200 pages per volume to our annual issue, beside 48 pages of cover, and we find the additional expense attending this increase, is more than 50 per cent. on our former outlays—but the increase to our subscription list has been far from being proportionate thereto—though we have no cause to complain, as there is a healthy and regular increase to our list, and the advertising custom pays for the extended accommodation made for it.

HEREFORD CATTLE.—The Herefords are a distinct breed of neat cattle, and have long been bred to a considerable extent in England where they are held in high estimation, especially for grazing. Their introduction and dissemination in this country has been comparatively slow, and hence they are yet little known in many sections. Of late years, however, they have gained more rapidly in public favor, and now rank as a most beautiful and profitable breed. Marshall gives the following description of the Hereford:

"The countenance pleasant, cheerful, open; the forehead broad; eyes full and lively; horns bright, taper, spreading; head small; chops lean; neck long and tapering; chest deep; bosom broad and projecting forward, shoulder-bone thin, flat, no way protuberant in bone, but full and mellow in flesh; chest full; loins broad; hips standing wide and level with the chine; quarters long and wide at the neck; rump even with the level of the back, not drooping nor standing high and sharp above the quarters; tail slender and neatly haired; barrel round and roomy; the carcass throughout deep and well spread; ribs broad, standing flat and close on the outer surface, forming a smooth, even barrel, the hindermost large and full of strength; round-bone small, snug and not prominent; thighs clean, and regularly tapering; legs upright and short; bone below the knee and hock small; feet of middle size; flank large; flesh everywhere mellow, soft and yielding pleasantly to the touch; color a middle red, with bold face, characteristic of the true Herefordshire breed."

THE LITTLE PILGRIM."—This excellent little paper for children, edited by *Grace Greenwood*, and published by L. K. Lippincott, Philadelphia, at 50 cts. per annum, begins a new volume, with this month, and we can most cordially recommend it to parents, as a work well calculated to please and instruct their children. It will give us pleasure to forward subscriptions.

VIRGINIA STATE AGRICULTURAL SOCIETY.

At the late annual meeting at Richmond, the General Assembly went into election of the officers of the Virginia State Agricultural Society, for the year ending 1st January, 1858. Whereupon, Mr. Cocke being nominated for re-election, and being withdrawn by Mr. Macfarland, who, speaking by authority of Mr. Cocke, stated that he could not, under any circumstances, hold the office any longer, having only consented to the last election to relieve the Society of the difficulty in its then organization of making another choice,

Mr. Edmund Ruffin, of Hanover, was then nominated and unanimously elected President.

The following officers were then successively elected :—

Vice Presidents :—1. John R. Edmunds, of Halifax. 2. Willoughby Newton, of Westmoreland. 3. Lewis E. Harvey, of Amelia. 4. Thomas L. Preston, of Washington. 5. William M. Tate, of Augusta. 6. William Townes, of Mecklenburg. 7. G. S. Meem, of Shenandoah. 8. William Massie, of Nelson.

Executive Committee :—William Boulware, William H. Richardson, Jeremiah Morton, R. H. Dulany, James B. Newman, William C. Knight, Hugh M. Nelson, William M. Radford, William G. Crenshaw, F. G. Ruffin.

Secretary and Treasurer :—Charles B. Williams.

The portraits of John Taylor, of Caroline, the author of "Arator," and of Fielding Lewis, of Charles City, "the first in the State to use lime on a large scale as an improver of the soil," have been generously presented to the Society; the former by his grandson, John Taylor, Jr., and the latter by Robert Douthat and seven other grandchildren of Mr. Lewis. These portraits will be preserved as grateful souvenirs of venerable names, connected with the history of Virginia Agriculture as pioneers of improvement.

On the motion of Mr. Macfarland, of Richmond city, the following resolution was *unanimously* adopted :

Resolved, That for his munificent donation to agricultural education, and for the wise and patriotic dedication of it, Philip St. George Cocke, Esq., is entitled to the enduring gratitude of this Assembly, and of all good citizens, and that the Speaker communicate to Mr. Cocke the grateful acceptance by this Assembly of his noble benefaction, and the high esteem and respect entertained for him.

On motion of Wm. H. Macfarland, of Richmond,

Resolved, That the munificent donation of Philip St. George Cocke towards the foundation of an agricultural school in the University of Virginia, be, and is hereby accepted.

Mr. Edmunds, of Halifax, offered the following resolution, which was unanimously adopted :

Resolved, That a committee of five, composed in part of the Speaker, and of Mr. Cocke, and such others as the Speaker may select, be appointed to confer with the Visitors of the University, and to make arrangements for the establishment of a professorship of agriculture in that institution.

On the motion of Wyndham Robertson, of Richmond, the following was adopted as an amendment, and to be added to the above resolution, viz:

"And that said committee be instructed in making arrangements for the establishment of said professorship to express the unanimous wish of the Farmers' Assembly that the name of its noble donor be connected with the chair endowned by him.

The Speaker then proceeded to appoint the remainder of the committee. The committee consists of the following gentlemen :—Hon. Wm. C. Rives, Philip St. George Cocke, Wm. H. Macfarland, Willoughby Newton and Franklin Minor.

On motion of Wm. H. Macfarland, it was

Resolved, That the Executive Committee cause to be made a marble bust and a portrait of Philip St. George Cocke, Esq., to be bestowed as this body shall hereafter determine.

CLOVER.

From some suggestions in the Ohio Cultivator, on the cultivation of clover, we make the following extract, containing some valuable practical information :

"Clover wants potash, soda, magnesia, &c., as there is, in every half ton of clover, twenty-three pounds of carbonic acid, sixteen pounds of potash; forty pounds of soda, eight pounds of magnesia. These are taken from the soil, and on burning the clover, will be found in the ashes. Half a ton of clover—or eleven hundred pounds in exact weight—will make one hundred pounds of ashes ; and in these ashes will be found the ingredients, and in the proportion we have mentioned, as well as phosphoric acid, sulphuric acid, chlorine, and sand in smaller quantities."

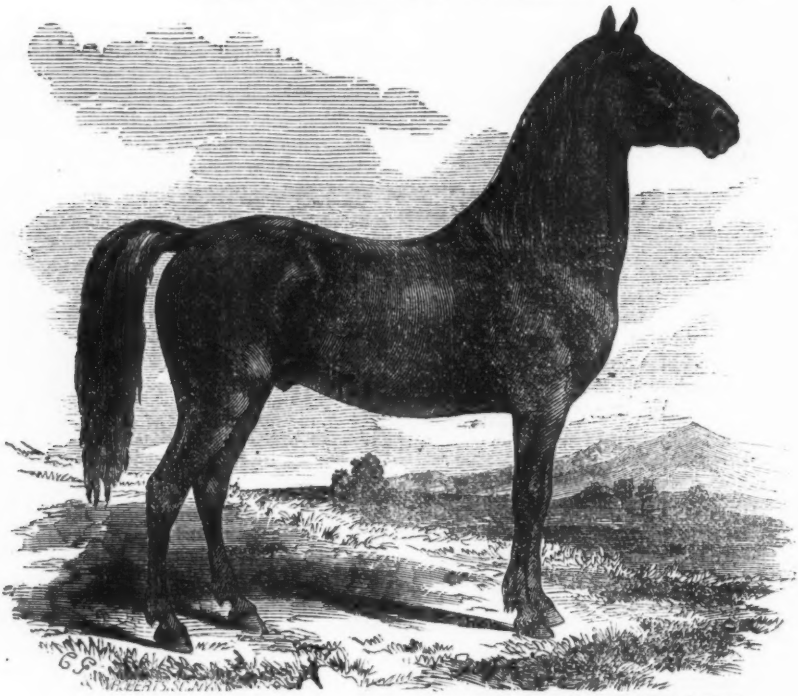
"Continued cropping of clover, taking these ingredients from the soil, will soon exhaust it, and unless they are supplied, the soil must cease to produce clover. Ashes contain potash; plaster contains sulphuric acid, salt contains soda and chlorine; and on the doctrine of special manures, these will be good for the clover, and experience confirms the theory."

"These are a part of the mineral ingredients.—The gases are drawn principally from the atmosphere. To do this, clover is peculiarly adapted, by its extensive system of leaves and flowers; and by its deep-running roots, it almost makes amends for the want of deep plowing. It brings, from the sub-soil, mineral matters that few other plants reach, and furnishes them to other plants when the clover is ploughed under, or fed to cattle, and the manure, containing the ingredients, spread on the land. The clover roots bring up the mineral ingredients from a great depth; and when ploughed under, they are left, in a soluble form, near the surface. The gases drawn from the atmosphere, are also left in the soil, for the use of those plants that have not the faculty of gathering them for themselves."

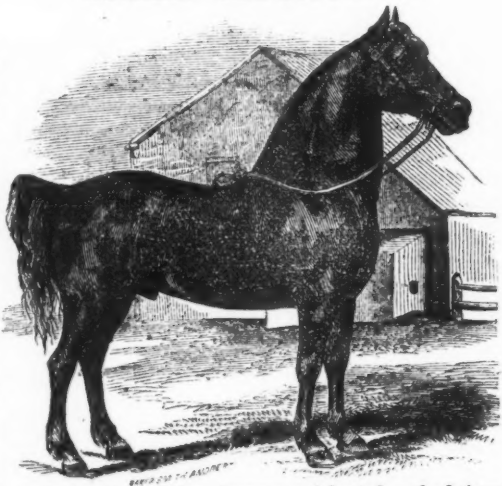
"Corn requires a large proportion of potash and sulphuric acid, and would be benefitted by a similar dressing, or by taking it second-handed by fallowing clover ploughed under. But vegetable manure is also necessary to form fibre. Powdered granite is found to be excellent manure, but it cannot form fibre. To obtain a full value of either, both should be used—the vegetable and mineral."

GOLDEN EAGLE.

By one of the Stallions sired by JUSTIN MORGAN.



GREEN MOUNTAIN.



THE MORGAN HORSE.

In our last, we noticed the recent publication from the press of C. M. Saxton & Co. of New York, of Linsley's Premium Essay on the origin, history, &c., of this celebrated breed of Horses, and accompanied it with the portraits of two of the most celebrated of the breed. We now present a few extracts from the Essay, and with the permission of the publishers, will occasionally take further liberties with it.

JUSTIN MORGAN.—After controverting some statements relative to certain horses sired by this celebrated stallion, the writer adds:—

"Between all the stallions left by him there was a very close and striking resemblance, in size, form and general character, and they also bore equal resemblance to their sire; indeed, the power of transmitting to his progeny his own form, constitution and temperament, was a very distinguishing trait of the Justin Morgan, and we believe no horse ever lived that possessed in a higher degree the power of stamping upon his offspring his own great leading characteristics.

Although it is *not* true that only four stallions were kept from the old horse, yet it *is* true that but four of them became celebrated, and of these four, (Revenge) derives his chief celebrity from the association of his name with those of Sherman, Woodbury, and Bulrush. Not that he nor the others we shall mention were necessarily less valuable than the three just named, but accidents of location and ownership will often prevent the

most valuable animals from becoming well and favorably known.

The important features that characterized the Justin Morgan, his compactness of form, his high and generous spirit, combined with the most perfect gentleness and tractability; his bony, sinewy limbs, his lofty style, and easy but vigorous action, were stongly and strikingly impressed upon his offspring. Not only did his valuable qualities descend unimpaired to the *next* generation, but apparently with little diminution to the second and third; and thus it is that where pains have been taken to select both sires and dams, possessing most of his blood and characteristics, young colts may now be found that closely resemble him in all important respects, except size, in which there has been a decided increase. We have stated our belief that there were more than six horses kept as stallions, but we think it doubtful whether *any* stock can be traced to the Fenton horse, and but very little is descended from Revenge or the Hawkins horse.

The Hawkins horse was foaled in 1806, or 1807, the property of Mr. Melvin, of St. Johnsbury, Vt. He was sired by the Justin Morgan, his dam was a bay about fifteen hands high, of fine form and excellent action. She was sired by a black horse brought from Connecticut, and said to have been an imported thorough-bred racer, but it is not probable that he was, as we can find no record of any such importation near that time, or sufficiently near to render it probable that his dam could have been sired by such a horse.

When three years old, Mr. Melvin sold him to Olney Hawkins, a near neighbor. Hawkins was Captain of a troop, and he bought the colt to use as a parade horse. After keeping him five or six years, he sold him to his brother Stephen. Stephen kept him two years at St. Johnsbury, and then took him to Stanstead, Canada East. Here the horse remained a few years, and left some stock. From Stanstead he was taken to Upper Canada, but after this we are unable to trace him, and do not know where he was kept or when he died. He was a jet black, about fifteen hands high, not quite so compact as his sire, a little taller, and a very little heavier. His shoulders, back and loins, were excellent. He carried his head high, had a bold, resolute, and vigorous style of action, and was undoubtedly the fastest horse of the six; he was a smart trotter, and a good runner. His eye was a little fierce in its expression, and he was inclined to be cross, and not so tractable as the rest. He was one of the best acting and finest-looking horses under the saddle ever in the State.

The Fenton horse was foaled in 1808, the property of Richard Fenton, of St. Johnsbury, Vt. He was sired by the Justin Morgan; dam, a bay of unknown blood, nor can we learn any particulars of any importance respecting her form and style, except that she was well known in the neighborhood as an excellent animal. He was a beautiful blood bay, with black legs, mane, and tail; and about fourteen and a half hands high. He very closely resembled his sire, was very compact and muscular, had the same nervous and vigorous action, the same lofty and fearless style, and are inclined to think was one of the best, if not *the best*, of the Justin's colts. There were but few colts left by him, as when six years old he bit his owner quite severely, and he had him castrated. We cannot learn that any of his colts were kept as stallions.

Revenge was foaled in 1815, the property of Cyrus Moore, of Claremont, N. H. Sired by Justin Morgan. Dam, a light brown with a white stripe in the face, and white hind feet; she was a smart driver, but did not carry her head high; nor did she have a good gait, as she sometimes paced. Her sire is not known; her dam was bay with white in the face, and was owned by Mr. Ball, of Unity, N. H. She paced a good deal, but was very smart. Nothing is known of her sire or dam, but she was called at that time a "Narragansett pacer."

Mr. Moore sold Revenge the autumn after he was two years old to Nehemiah Rice. Mr. Rice kept him two or three years, and sold him to a Mr. Tyler, and he kept him in the vicinity of Claremont until nine years old, when Mr. Moses Wheeler, of Claremont, purchased a half interest in him, and the next season purchased the other half. After keeping him one year, Mr. Wheeler sold him, and he passed through many different hands. He was kept near Connecticut river at Claremont, Croydon, Cornish, Wethersfield, and intermediate points. In 1835 or 1836, he became the property of Edwin Billings, of Claremont, who kept him until he died. In April, 1837, Mr. Billings drove him into Chester, Vt., intending to go to the western part of the State, but here the horse was taken sick and died suddenly.

Revenge was a dark bay, or light brown. In the spring after shedding his coat he might almost be called a black, but in the winter he was often called a bay; he was about fourteen and a half hands high, and weighed fully one thousand pounds; he had less action than either Woodbury or Sherman; but he had a very close-knit form, with excellent back, loins, hips, and limbs; his chest and shoulders were not so fine as some of the others, nor did he have a very smooth, easy gait, but he never paced nor hitched. He had plenty of life, great endurance, and, as one of his owners said to us, "he was an ugly customer to get away from on the road." His stock were dark bay or brown, and occasionally chesnut. They had good size, were strong, hardy, and enduring; generally free drivers, but had not as easy action nor as good style as the stock from the others; and some of them would both pace and trot. When a colt, Revenge was frightened by the breaking of some portion of his harness or carriage, and ran away. From the effects of this fright he never fully recovered, and if driven single would pull hard when a little excited, but we have not heard of his ever running, except on the occasion just mentioned. He was perfectly sound.

Of his colts, we have been able to learn of but one that was kept a stallion. It was a very dark chesnut, about fifteen hands high, and weighed about ten hundred and fifty pounds. In 1853 he was owned by Mr. John Clark, at Dunham, Canada East, and we think was raised by him at Windsor, Vt., where he formerly lived. This horse had an excellent, open gait, fine style, and was called the fastest horse in his neighborhood.

As it has been stated that the dam of Revenge was white, we have taken much pains to obtain the most reliable information upon this point, and have visited several persons who knew her well for years, and knew the colt "Revenge" from the time he was foaled until he died, and without a single exception they describe her color as we have stated it.

Sherman was foaled in 1808 or 1809, the property of James Sherman, of Loyndon, Vt. It has been said, that Sherman was foaled in 1810, and it has also been said that he was foaled in 1811. It is not at all surprising that his age should be understated by a year or two, as the horse who lives to be more than ten years old, loses nothing so easily as one or two years of his age."

PROCEEDINGS OF THE EXECUTIVE COMMITTEE OF THE MARYLAND STATE AGRICULTURAL SOCIETY.

Nov. 28th, 1856.

The Executive Committee met pursuant to a call of the President. Present, J. T. Earle, Esq., President, and Messrs. R. M'Henry, Jno. Merryman, Jas. N. Goldsborough, Frank Cook, and N. B. Worthington.

The President stated the object of the meeting to be, to examine into the financial operations of the Society, so as to make a report for the guidance of their successors elected at the annual meeting, who, by the constitution, are to meet on the 2d of Dec. to enter on the duties of their appointment.

Mr. Martin Goldsborough, Marshal, asked for a re-consideration of the report of the Committee on his account, adopted at a former meeting. On motion, he was directed to make a statement in writing, which was subsequently presented, and his claim, amounting to $18, was, on motion ordered to be allowed him.

Mr. Merryman moved that a committee be appointed to examine the accounts of the Treasurer, which was concurred in, and Messrs. Merryman, Cooke and Worthington, were appointed the Committee—who subsequently offered the following report:

The undersigned Committee appointed by the Executive Committee of the Maryland State Agricultural Society, to examine the accounts of Robert Bowie, Esq., Treasurer, beg leave to report, that the accounts as presented to them, show his receipts to have been $9,756.20
Disbursements, 9,475.18

Leaving a cash balance in Treasury, $281.02
Less counterfeit money, 21.25

$259.77

Add for this amount for sales of manure, Martin Goldsborough's note, 67.00

$326.77

They estimate the indebtedness of the Society for premiums awarded for exhibition of 1856, at $750.
Amount due P. Malcom & Co., 145. $895.00
Against which amount is the sum in Treasury, 259.77

*$635.23
67.00

$568.23

JOHN MERRYMAN,
FRANK COOK,
N. B. WORTHINGTON.

[*Note—It was subsequently found that several orders had been given on the Treasurer, which were not included in this estimate, and that the amount due by the Society, was about $1000—ED.]

The same Committee reported that they had examined the accounts of S. Sands, for premiums, &c., prior to the last show, and report them correct.

[By the report it appears that there was a balance in his hands after last report of examining Committee, of $48.71
Received since, money borrowed, 2067.10

2115.81

And that he has paid for notes due by the Society, premiums, &c., as per vouchers, $2094.31
And leaving a balance in his hands of 21.50
And that the amount of premiums for 1854 and 1855, still uncalled for, amount to $55—though it is believed that the balance above stated, will be sufficient to meet the demands likely to be made on the Treasury, on this account, for the two above years.]

Mr. R. M'Henry, moved that a subscription paper be prepared for voluntary contributions, to clear off the balance of the outstanding debts due by the Society—which was concurred in, and several members of the Executive Committee present affixed their names to the paper, which was prepared for the purpose.

On motion it was ordered, that the amount due by Mrs. Kennedy, on account of booth rent, at the late Show, be remitted her.

The Committee then adjourned sine die.

Test, SAML. SANDS, *Sec.*

DECEMBER 2d, 1856.

The Executive Committee elected at the annual meeting of the Society, met this day, pursuant to the requirement of the Constitution, and at the call of the President.

Present, R. M'Henry, Esq, President, and Messrs. Saml. P. Smith, M. T. Goldsborough, Frank Cooke, and Geo. R. Dennis; and Saml. Sands, Secretary.

On motion of Mr. M. T. Goldsborough, the proceedings of the last meeting of the late Executive Committee were read.

The first business in order, was the establishing the salaries or compensation of the officers entitled thereto under the Constitution—which were fixed as follows, viz:

That the general Secretary receive one hundred dollars for his services during the current year, to become due at the expiration thereof.

That the Treasurer's compensation for the current year be ten per centum of the sums collected by him, it being understood that out of said ten per centum he shall compensate deputies and the other assistants necessary to the proper discharge of his duties. That the Marshal's compensation for the year shall be two hundred dollars, to become due at the expiration thereof.

On motion, it was ordered, that the President and Mr. Cooke, be a committee authorised to provide rooms for the Society more convenient than the present.

A communication from J. H. M'Henry, Esq. was received, apologising for his absence from the meeting of the Committee, in consequence of an accident, and offering some suggestions on the subject of the next premium list—which was ordered to be placed on file, and its further consideration postponed until the next quarterly meeting.

A communication on the subject of manures, from the Board of Trustees of the Agricultural

Society of Talbot, referred to the consideration of the Committee, by the Society at its last annual meeting, was considered, and laid on the table until the next quarterly meeting.

On motion of Mr. M. T. Goldsborough, it was ordered that an address be prepared to the citizens of Baltimore, on the subject of the Annual Exhibitions of the Society, showing their bearing on the interests of the city.

On motion of Mr. M. T. Goldsborough, the President and Messrs. F. Cook and W. W. Glenn, were appointed a Committee to make such disposition of the show grounds as they may deem necessary.

The Committee then adjourned to the first Tuesday in March. Test, SAML. SANDS, *Sec.*

WORK FOR THE MONTH.

JANUARY.

Having on other pages, laid down some general rules for your consideration, which are respectfully submitted, we will, in addition thereto, point out some of the many things that should claim your attention during this month.

FIRE-WOOD.

As we have often witnessed the great inconvenience and discomfort arising from delays in the procurement of fire-wood, we bespeak particular attention to this matter now. Every head of a family should, and doubtless does feel a deep and absorbing interest in securing a full supply of fuel for his mansion as well as for his quarters. We would deferentially advise all planters and farmers to go to work at once, cut down, if not already done, and have hauled into his yards, respectively, a full supply of wood to last from now till this time next year. We say to all, to consider the procurement of an ample supply of fuel a labor alike of duty and of love, and to push ahead and cease not until this desirable task is performed.

FENCING.

So soon as the supply of fire-wood is secured, turn your attention to getting out as many posts and rails as will answer for all the repairs and new fencing you may require next year.

The timber for these purposes being once felled and cut into the proper lengths, should be hauled into the barn-yard, where, under cover, your hands, in the inclement days during winter, can be employed in fashioning them into shape. By timely attention to these suggestions, your posts and rails will be ready for use when the spring opens.

SURFACE DRAINS.

The surface drains in your grain fields should be examined every few weeks, and have all obstructions to the free passage of the water removed from them.

WORKING OXEN AND MULES.

Care for these as we advised last month.

THRESHING GRAIN.

Attend to this at as early a period as possible, so that you may have your grain ready for market, and you select your own time to send it thither, and thus be enabled to escape the over-reaching of grain speculators.

Recollect that, as the expense and trouble of growing your grain has been yours, so should the profit be yours.

STORE HOGS, AND IN-PIG SOWS.

Without stuffing these let them be so fed as to be kept in a growing condition; let them have warm sleeping apartments.

SHEEP.

In the treatment of these, pursue the course for winter management that we pointed out last month.

MATERIALS FOR MANURE.

Accumulate all rough materials on your farm, and so dispose of them as that their virtues will not be lost.

GATES.

If you have not already done so, employ your hands this winter in providing gates for all your fields.

FOWLS.

Provide, under cover, a body of sand, one of slaked lime, and one of ashes for your hens to dust themselves in; give them occasional messes of meat or liver cut fine, or of fresh fish boiled; feed them generously with grain thrice a day, and let them have fresh water at all times.

WORK IN THE GARDEN.

JANUARY.

Except in such gardens as are provided with hot beds and frames, there is but little to be done therein during this month. But, by the bye, every garden should be provided with them.

SOWING CABBAGE SEED.

Those who have not covered hot beds, can raise as many early cabbage plants as may serve the wants of their family, in this simple way: fill a candle box with rich mould, sow your cabbage seed of sorts therein, place the box in your kitchen window or any other window with a good sunny exposure. Occasionally water, with water with the chill taken off. Of very cold nights cover the box with a cloth.

GARDEN TOOLS.

See that these have been cleaned and carefully put away out of the weather.

GEORGIA FLOUR.

We gave in our last some facts in relation to the value of the flour made from wheat raised in North Carolina. The flour made at the Mills in Richmond, principally from Virginia wheat, have a world-wide celebrity, especially for the markets of the Southern countries of this hemisphere, and always bear a higher price than other brands. The flour and grain shipped from the South to New York and other Northern ports, also command higher rates than that from the West. Georgia, that rising giant of the South, has been making rapid strides in the developement of her agricultural resources, and in no branch has she been more successful than in the production of fine wheat. Some of her public spirited Millers a few years ago, offered very liberal premiums for the best samples brought to their Mills, which had a tendency to stimulate the growers to increased efforts to excel in its production, and no doubt the happiest results have flowed therefrom, and the State is now enjoying the benefit. The Augusta Constitutionalist, says—

"There is no department of enterprise in Geor-

gia which has been prosecuted with more energy and success than the flour business. An analysis of the wheat cultivated in the State has shown that it contains a larger portion of gluten, when compared with the analysis of other wheat, than similar grain cultivated in any other portion of the globe, and a comparison of the flour with the most favored brands elsewhere, will show that several Mills in Georgia produce that which is equal to the best in any market in the Union. Climate, capital and enterprise have achieved these results in Georgia, and the increasing demand is conclusive evidence that these facts are gradually finding their way among the masses of the heavy dealers in that article.

"At the present time there is a steady demand for Georgia flour for home consumption, and a large demand for export to Spain. The "Granite Mills," of Augusta, it is stated, have sold during the past month, some three thousand barrels for the Spanish market, and although running night and day, are unable to meet the orders. Other Mills are turning out from forty to one hundred barrels per day, and the demand keeps up to the production. The Mills in the State are not well supplied with wheat at present, and the crop it is also stated, will be ground up earlier than usual."

NEW ADVERTISEMENTS.

We call attention to sundry new advertisements, on the cover of this No. of the American Farmer—among them, from

Rogers & Boyers, offering their Farm Mill to the public, to which we have heretofore called attention—they have also the Chinese Sugar Cane Seed.

Isaac Pullen, of Hightstown, N. J., well and favorably known to many of our readers, offers a variety of ornamental and fruit trees.

J. M. Thornton & Co., New York, seedsmen, beside a number of other new plants, offers the Dioscorea Batatas, or Chinese Potato or Yam, to those disposed to give it a trial —they have also the Sugar Cane Seed, &c.

Geo. S. Bandel, of Baltimore, is agent for the sale of the Wyandot Corn, which he is ready to supply to all applicants.

D. J. Griscom, of Woodbury, N. J. has a large stock of Evergreens, and other Trees, to which we would invite the attention of those wishing to adorn their homesteads, as every one should do.

Jno. Kettlewell, of Baltimore, offers on his own account, the Manipulated Guano. Mr. K. has heretofore been connected with Mr. Reese, in the manipulation, but is now operating on his own account. This mode of using guanos, has been highly approved of during the past year, and our readers are aware of our appreciation of it.

Jno. S. Reese, it will be seen, will continue the business of the sale of Manipulated Guano, and has united with him Jno. W. M'Conkey, who intend conducting the business on an extended scale.

J. J. & F. Turner, again present the De-Burg's Super-Phosphates to the public; the certificates they present, are from the most reliable men.

H. F. Stickney, Baltimore, offers his snow white Mineral Paint, which obtained Diplomas at the late Exhibition in this city. It is worthy the attention of those building, or intending to brush up in the Spring, as it is believed to be superior to the common paint, and cheaper. We intend using it in renovating our own premises.

A fine young durham heifer, is advertised for sale at this office.

Messrs. Bibb & Co., it will be seen, offer their Little Giant Corn and Cob Crusher, at very reduced prices, to close their present stock.

STIR THE SOIL.—The greatest horticulturist, almost, of the present day, says, "If I had '*a call*' to preach a sermon on gardening, I should take this for my text: STIR THE SOIL."

THE MANAGEMENT OF MANURES.

FROM THE FARMERS' MANUAL, BY F. FALKNER, ESQ.

"We have already said, that plants in a dry state, such as straw, hay, &c., consist of carbon, hydrogen and oxygen, a very small portion of nitrogen, and of about six parts in 100 of alkaline and earthy salts; and that the former elements are placed, by the operation of the vital principle, under a different arrangement with regard to each other, from that which their chemical affinities give them a tendency to assume.

The combustion on burning of vegetable substances is nothing more than a rapid and violent action of those affinities or attractions, in which oxygen plays the principal part. When they are heated to a certain degree, both the oxygen of the air and that already contained in the substance are brought into action, and the result will be easily understood from what has been previously stated of the nature of the elements concerned. The oxygen unites with the carbon to form carbonic acid gas, and with the hydrogen to form water, while a small portion of the hydrogen unites with nitrogen to form ammonia, or (though subject to some doubt) passes off uncombined. Carbonic acid gas is the most abundant of these products, water the next in quantity, and ammonia by far the least. These all escape as gases, and the ashes that remain consist of some or all of the oxides or bases before described, united with some or other of the mineral acids—as alkaline and earthy salts, which differ very much both in kind and quantity, according to the plants from which they are derived. As these salts or mineral substances constitute an essential part of all plants, they are themselves capable of acting powerfully as manure. The most valuable and generally the most plentiful of them, are the salts of potash and the phosphates of lime and magnesia; not that the other salts contained in ashes are less essential; as for instance, muriate of soda (*common salt*) and sulphate of lime, (*gypsum,*) but because the latter are more liberally supplied by the hand of nature.

If, instead of being burnt, plants are accumulated in heaps exposed to the weather—as in a dung-yard—a similar action to burning, though of slower operation, takes place; which, indeed, may be called a tardy combustion, in which the elements of the water present take an active part. The greater portion of the carbon, hydrogen and oxygen, with nitrogen, are thus dissipated; the sulphates and phosphates are decomposed, producing stinking gases; and if, in the meantime, water be allowed to soak through the mass and drain away, it carries with it the soluble salts, ultimately leaving a black mass consisting chiefly of carbon, with a small quantity of hydrogen and oxygen, and some insoluble earthy salts. If, therefore, decay be allowed to proceed to its greatest extent, it produces a much worse effect than absolute fire, inasmuch as all the soluble salts are lost. Vegetable matter reduced to this state is *humus*, or that black vegetable matter contained in all rich soils, and those of old pasture lands. The only difference is in the mode of their production, the one having been produced by the decay of plants on the surface, and the other from the decay of the roots and leaves of plants, both above and beneath the soil. They operate in the same way in the nourishment they yield to plants, namely, by the salts they yet retain, by attracting moisture and ammonia from the atmosphere, and by slowly yielding carbonic acid gas to the roots of the growing crop.

If the quantity of water which mixes with the heap be limited, it is often evaporated by the heat produced by the fermentation; the chemical action in a great measure ceases; and the heap when opened, exhibits that appearance which is commonly called *"fire-fanged."* When in that state it will be found to have lost more than half of its value; but if due care be taken to regularly mix the layers of dung, without too much intermixture of horse-litter, there will be no danger of the dung made by the cattle in the yards being over-heated by fermentation, even in the warmest weather. Should that danger, however, be apprehended, an addition of road scrapings, or earth of any kind, will prevent it; and in winter the cleanings of the cow-house, as being of a colder nature, will answer the purpose.

When plants and their seeds are consumed by animals, nearly half of their weight in a dry state, is given out from their lungs, or by perspiration from the skin, in a gaseous form, chiefly as carbonic acid gas and water, with some ammonia; the remainder of their substance, together with the effete or dead matter of the animal organs, are rejected, as dung or urine, except that portion retained as nourishment by growing and fattening animals. The *solid excrement* contains the woody fibre, the insoluble animal matter and salts; and the *urine*, the more soluble salts and substances rich in nitrogen. If no care be taken of the urine, and it be allowed to run about the yard, it soon putrifies—its nitrogen flies off in the shape of ammonia; its salts are carried away by every shower of rain; and, although a portion of it may be saved, by its mixture with the dung of the cattle, yet the greater part of its valuable contents are evaporated by the action of the atmosphere. If it be allowed to drain into a tank or other receptacle, it there also rapidly undergoes putrefaction; and if this be not checked, a considerable part of the ammonia produced will escape with the sulphur and phosphorus, resulting from the decomposition of the salts containing these substances; occasioning the intolerable stench observed in such cases. Now the ammonia, and the alkaline and earthy salts, are by much the most valuable part of farm-yard or stable dung, and the former is always more abundant, when cattle are fed with corn, oil cake, and other rich food. Without ammonia no seed could be produced; and without alkaline and earthy salts, neither seeds nor plants could exist.

It is the deficiency of some of these substances, when moisture is not wanting, which is the cause of land producing poor crops; and it is the almost total absence of some or all of them, which is the cause of complete sterilty. Instances may almost every where be found of land, which though abounding in humus—such as heathy and peaty soils—are, notwithstanding, incapable of bearing grain. If the valuable substances above mentioned be wasted in the manner described—which is too often the case, to an enormous extent—the crops will be very deficient; and if to this waste be added, the carrying away of large portions of the produce—as when hay and straw are sold and no manure returned—the land will soon cease to bear crops. To increase the quantity of manure raised on the land, should therefore be the constant aim of every farmer; hay should never be sold unless two tons of stable litter are returned for every load sent off the farm; and, unless the farm contains a large portion of rough pasture, the horse teams should be kept in the stables, and soiled during the summer and autumn on green food; every portion of apparently refuse vegetable and animal matter should be carefully collected and added to the dung-heap; and in this manner it is inconceivable what additional quantities of excellent muck may be produced. The manure thus made, and not fermented, is generally applied either in its fresh state, or only partially turned, to clay land fallows which are to be sown with wheat; as being of a colder nature than winter-made dung, it will not occasion the crop to be pushed so hastily forward as to occasion straw instead of corn.

If attempts be made to supply the place of farm-yard dung, by *any one salt*, or, in other words, by two or three only of the elements of plants—nitrate of soda, or nitrate of potash, or sulphate of lime, (*gypsum,*) for instance—it will succeed only when all the others happen to be present on the soil by the effect of previous manuring; and will inevitably fail where those other needful substances are either absent or very deficient. Now, it is extremely difficult to ascertain in what salt the soil is really deficient; care must be taken, therefore, in the application of artificial manures, that they contain all the elements included in the muck for which they are substituted. They are usually found, more or less, in the dung heap; how needful, therefore, it is that the farmer should take care of that manure produced upon his own land, which certainly contains all the elements of plants, and upon which he knows he can safely rely.

It has been stated before, that the most efficient part of farm-yard dung is that small portion, invisible in the mass, which consists of earthy and alkaline salts and ammonia. The other ingredients which constitute the great bulk of manure, consisting of carbon and the elements of water, are abundantly supplied by the atmosphere to the growing plants, and therefore, a loss of these by needless fermentation or neglect, is of little importance, were it not that their loss is unavoidably accompanied with the waste of the more essential substances in the manure described. It should be the object of the farmer, not only to prevent the waste of such precious substances by every means that knowledge and ingenuity can devise, but also to make every addition to them that nature or local circumstances have placed within his reach.

These very desirable purposes he will be better able to carry into effect when he fully understands the nature of the manure he has under his management, and by that means he can exercise a sound discretion in adding to its quantity and effect.

Let it not be alleged against any inquiry by the farmer into the constituent nature and chemical properties of his manure, that he has no ideas attached to the several terms used to designate the substances of which it is said to consist. He is obliged to learn the names and uses of the several implements he employs in the cultivation; and upon what principle, we may ask him, should he refuse to make himself acquainted with the names and general properties of the produce he raises? But little effort is required to obtain a precise knowledge of the several elements or substances, at least by the employment of which, he is enabled to raise and increase his crops, and is it not pleasant to learn, as well as most useful to understand, the reason of their value to him? Nor is this limited degree of chemical knowledge of difficult attainment. Every farmer has seen wood ashes, and also seen water poured upon them, for the purpose of extracting a something; that substance is chiefly potash, which may be seen by evaporating the clean water, which leaves

the alkali behind, and the dregs which remain behind consist, for the most part, of earthy phosphates —a similar substance to the earth of bones. *Soda* is now so commonly used, as to be known at sight to most persons; *lime* and *magnesia* are still more familiar; *ammonia* is the common pungent salt of smelling-bottles; *sulphuric, muriatic* and *nitric acids* are extensive articles of commerce, and, with *phosphoric acid*, may be found at any chemist's shop, and these acids as well as their bases—potash, soda, lime and magnesia—may be had for a trifle, either separately, or combined as salts. When, therefore, the appearance, or more obvious qualities of these several substances have become familiar, their efficacy as manure may be proved by mixing them thoroughly with two or three hundred times their weight of mould, and applying the compost to garden plants. The farmer might in this way soon become acquainted with the name, character and properties of the invaluable substances contained invisibly in the muck of his yards; and would be the better able, and more desirous, to prevent their stealing away from him."

Milk and Beef Cattle of England.

ALDERNEY CATTLE.

The following extracts are from Lavergne's Rural Economy of England, Ireland and Scotland:

"The milch cow, *par excellence* of the British Empire, comes originally from the islands of the Channel, which are detached fragments of our Normandy. The breed usually goes under the name of Alderney. The greatest precautions are adopted for maintaining the purity of this race, which is, after all, only a variety of our own A large number of heifers are bred in the Channel Islands, and sold into England, where they are in the greatest request among the wealthy classes, for the dairies in the country."

Any one who has visited Jersey, must have admired those beautiful animals, so intelligent and gentle-looking, which stock the pasture-lands of that island, and which form a part of the family of every farmer there. Although naturally good, the affectionate care with which they are treated, has not a little contributed to render them so productive. The Jersey people are as proud and jealous of them as if they were the greatest treasures in the world.

"This race, however, has a rival in one which much resembles it, and which has been produced from it by crossing, namely, the Ayrshire, in Scotland. It is not long since Scotland was in an almost uncultivated state; Ayrshire, particularly, has been cultivated with some degree of care, only within the last fifty or sixty years. This county, at one time covered with heather and moss, has become a sort of Arcadia. Robert Burns, the shepherd poet, was born there. His rustic poetry, which was written about the time of the French Revolution, was coeval with the dawn of agriculture in his native country. The same feeling which inspired the pastorals of Burns, raised up that charming race of Ayrshire cows, whose graceful forms, speckled hides, quiet dispositions, large udders, and rich and abundant supply of milk, realize the ideal of pastoral life. And these animals are to be found too everywhere both in Scotland and England."

BEEF CATTLE.

Among the improved breeds, the Short horn, or Durham ranks first: It took its rise in the rich valley of the Tees. * * * The brothers Colling, farmers at Darlington, first thought of applying these principles, (the principles taught by Bakewell,) to the race of the Tees valley, and they obtained from it the first important results.—The herd of Charles Colling had attained such a reputation in thirty years, that when sold by auction in 1810, the forty-seven animals of which it was composed, and of which twelve were under a year old, were purchased for 178,000 francs, (£7-010.) The improved race of Short-horns has improved since that period, throughout the United Kingdom, and was some time ago introduced into France. The animals bred from it, may be fattened as early as two years old, and attain at that age a weight which no other breed can arrive at so soon. Their heads, legs, and bones have been reduced to such small proportions, and the more fleshy parts of the body so largely developed, that nearly three-fourths of their weight is meat.

"After the Short horn, which among cattle is what the Dishley (or Lancaster) breed is among sheep, come the Hereford and Devon breeds, which in their turn may be compared to the South Downs and Cheviots. The Hereford breed follows closely upon the Durham, and is even more generally sought after, as offering an almost equal precocity, the same aptitude for fattening, with better beef, and greater hardiness. The county of Hereford, from whence it comes, lies at the foot of the Welch mountains, and although renowned for its woods, its pastures, and its landscapes, possesses a soil of but indifferent fertility. The cattle it produces are fattened in the county, but are purchased at an early age by graziers, who bring them into more fertile lands, where they undergo more full development—a mode of treatment not easily accomplished with the Durhams, which require an abundant supply of food from their birth. * * * To a contemporary of Bakewell, Tomkins, is due the improvement of the Herefords."

EXTENSIVE SALE OF DURHAM CATTLE.—The Lexington (Ky.) Observer of Wednesday last, states the result of a sale of Durham cattle in Fayette. The herd was among the finest in the State, and the sale was largely attended.

14 cows brought $3,265—average price $223.31. The highest price paid was $445, by Dr. R. J. Breckinridge, for Lady Fairy, imported in 1850, by the Northern Kentucky Importing Company, and sold by them for $1,100.

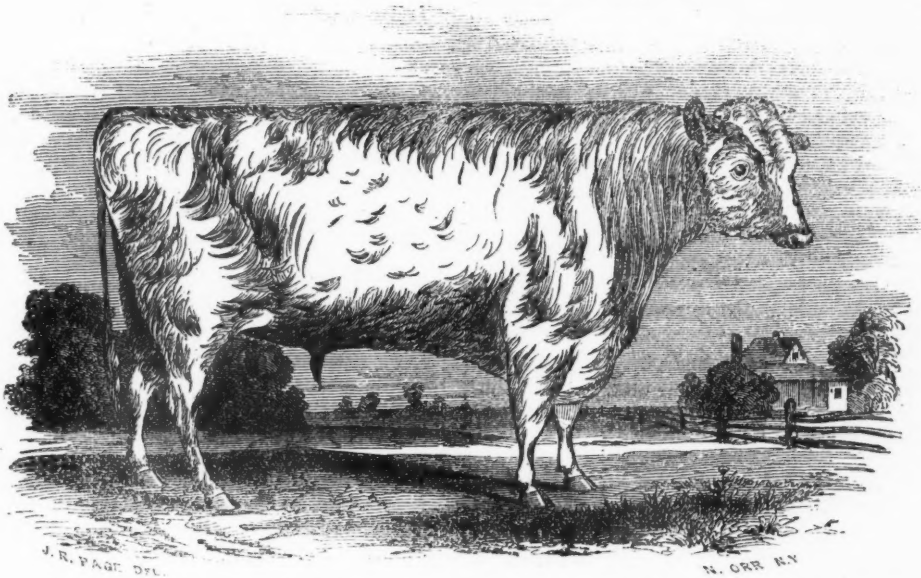
10 heifers brought $2,855 50—average $285.55. Highest price paid $605, for Lady Fairy 2d, 18 months old.

7 bulls brought $1,519—average price $209.—The highest price was $650, for imported Chilton. He cost in 1853, $3,005.

DRAINING.—Messrs. Rittenhouse & Crawford, of this city, are now prepared to furnish Draining Tile, which we have no hesitation in believing, are made of better material, than those manufactured elsewere. No one who has lands requiring it, will ever regret the expense of draining them, if judiciously done, and we hope to see a more extensive system of drainage commenced in our State.

☞ We most cordially tender to our readers, the compliments of the Season, wishing them all happiness for the new year.

RICHARD BOOTH. (A. H. B., 906.)



White; bred by R. Booth, North Allerton, Yorkshire, England; the property of T. P. Remington, Red Leaf, near Philadelphia; calved November 13, 1853; got (in England) by Richard Booth's Monk (E. H. B., 11,824); out of Rowena (imp. by T. P. Remington), by Sir Walter 2d (10,834); Rowena, by son of Noble (4578); Rowena, by His Royal Highness (4039); Ruth, by Belvedere 4th (3139); Polly Hopkins, by Adolphus (1611); Primrose, by Colonel (3425); by Alba (726); by Symmetry (641); by Marquis (1196); by son of Favorite (256.)

U. S. AGRICULTURAL SOCIETY.

The 5th Annual Meeting of this Society will take place at Washington city, on 14th January, at 10 o'clock, at which time the usual reports will be made; awards of premiums on field crops will be awarded; officers for the ensuing year elected, and Lectures by Prof. Henry and Charles L. Flint, Esq. and others, delivered. Agricultural Societies of the U. S. are requested to send delegates.

The following gentlemen have been appointed by the president, Ramsay M'Henry, Esq., to represent the Maryland State Agricultural Society at the annual meeting of the U. S. Society; viz:

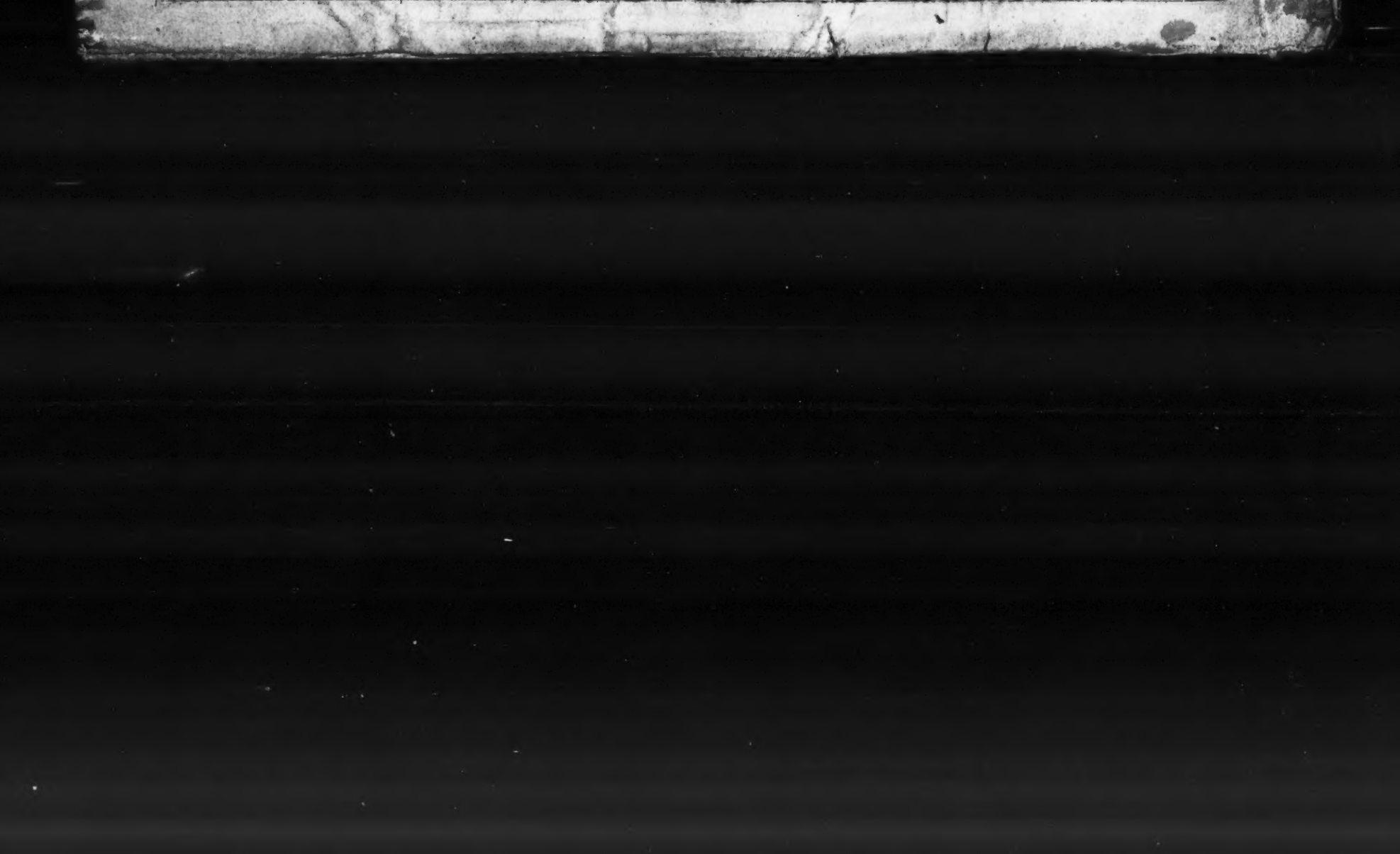
Dr. Saml. P. Smith, of Alleghany Co.
Dr. J. O. Wharton, of Washington.
Outerbridge Horsey, of Frederick.
S. T. C. Brown, of Carroll.
Chas. Ridgely, of Hampton, of Baltimore Co.
Jno. C. Brune, of Baltimore city.
Saml. Sands, of Baltimore city.
Edward Quarles, of Harford Co.
Robt. Dick, of Montgomery.
Col. Oden Bowie, of Prince George's.
Col. Geo. W. Hughes, of Anne Arundel.
A. Somerville, of Calvert.
Walter Mitchell, of Charles.
H. G. S. Key, of St. Mary's.
G. M. Eldridge, of Cecil.
Hon. Jas. A. Pearce, of Kent.
Jas. T. Earle, of Queen Anne's.
Jas. M. Goldsborough, of Talbot.
W. Hardcastle, of Caroline.
R. T. Goldsborough, of Dorchester.
Jno. S. Crochett, of Somerset.
Teackle Townsend, of Worcester.

Rural Poetry of the English Language, is the title of an elegant large octavo, beautifully bound and illustrated, and containing choice selections from the English and American, and transactions from some of the classic Poets. We regret that we had not time to examine it for a more extended notice in this number, but shall do so hereafter. It is a most desirable addition to our rural literature.—Compiled by Joseph Wm. Jenks, A. M., and published by J. P. Jewett & Co., Boston. Our copy is from Messrs. Armstrong & Berry, of this city.

☞The communication of Mr. Sim, on another page, contains just such information as is desirable for the farmer. We hope others who have information, based on practical results, will, like this gentleman, give it to the public, through our pages.

The Cassidy Peach Blossom Farm, situated in Sassafras Neck, Cecil county, Md., was sold on 3d ult. at auction. The farm contained 663 acres, and sold at $51.50 per acre, or $34,144.50. Mr. Anthony Reybold, of Delaware, purchaser. Mr. Reybold already held the farm at $6,600 rent, for the current year, and has realized $10,000 from it, besides a valuable wheat crop now growing.

CONTENTS OF JANUARY NO.



THE

AMERICAN FARMER

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

Vol. XII. **BALTIMORE, FEBRUARY, 1857.** **No. 8.**

ATTENTION FARMERS!
GUANO EXCELLED BY "DE BURG."

FURTHER TESTIMONIALS!

CONTINUED FROM JANUARY "FARMER."

Dr. Wm. F. Costen, Eastville, Northampton, Va., Dec. 20, 1855, says: I used De Burg on my Corn Crop at the rate of 200 pounds per acre, mixed with an equal bulk of fine Woods mould. This mixture was dropped in the hill and the Corn on it.

The Corn was soon up and grew off rapidly—it was the theme of conversation by all who saw it, in consequence of the rapidity, vigor, and luxuriance of its growth. It maintained its beauty and promise until blighted by a protracted drought, which lasted from 9th of June to 5th August. The unaided capacity of the land is about 5 barrels to the acre. I am confident I should have made 10 or 12 barrels had the season been favorable. In the growth of Irish Potatoes it proved equal to No. 1 Peruvian Guano, they were respectively used at the rate of 200 pounds per acre in drills, side by side; at digging I measured and could perceive no difference in the yield.

It is a more durable fertilizer than Guano.

B. B. Dutton, Esq., New Upton, Gloucester Co., Va., December 20th, 1856, says: I applied De Burg last Spring, on Oats and Corn. The Oats bid fair for a fine crop, but was cut short by the drought. A fair crop was gathered and were the only Oats that grew high enough to be reaped in our neighborhood. I applied only 100 pounds to the acre. On my Corn 150 pounds, in the hill at planting—the Corn grew finely and bid fair to yield 50 to 60 bushels per acre, but like the Oats, could not stand the long drought, which lasted from 1st of May to the last of July. But I am happy to say it put me above the larger portion of my neighbors, as the most of them are corn buyers, while I have plenty, gathering more from the 20 acres upon which the De Burg was applied, than 50 acres highly manured with Stable, Hog-pen and other Manures.

I did not use any Guano last Spring, but have been using the best Peruvian Guano on Corn and Oats for several years. My opinion is, that De Burg will pay better than Guano, had the farmer to pay the same price for it. I expect to use no other fertilizer on Corn or Oats while De Burg is in the field.

Thomas Hickson, Esq., Farmville, Va., says, 19th December, 1856: I applied De Burg this year on my Tobacco—I am satisfied it was much injured for want of work at the proper season, notwithstanding, it was a fair crop; every difficulty considered.

Severn Eyre, Esq., Eastville, Northampton Co., Va., says, 21st December, 1856: My Overseer tells me he could perceive no difference in the Corn between where he applied De Burg and equal number of pounds of No. 1 Peruvian Guano, side by side. I requested him to examine closely with a view of judging.

B. D. Spalding, Esq., Charles Co., Md. December 25th, 1856, says: June 1855, I applied De Burg in the hill on Corn, Stone and Sand Land, and the yield of Corn was good. In June and July, 1856, I applied De Burg in the hill on Tobacco, and the yield was better than that grown by the application of No. 1 Peruvian Guano on better land. My opinion (from my imperfect observation) is, that its application in the drill or hill for Tobacco, is as good as No. 1 Peruvian Guano, and better in the hill for Corn, as it will not "fire" the Corn.

John F. Moore, Esq., Hampton, Va., says, 19th December, 1856: Last spring I applied De Burg on Corn, 20 acres, half a gill to the hill, owing to the great drought I could not give it a fair trial. I like it better than any manure I ever tried. I had "Dung hill," "Pigeon" and other manures applied in the hill this year, and "De Burg" stood the drought better, and made more Corn. I expect to derive benefit from it in my wheat put in after Corn.

Thomas P. Copes, Esq., Locustville, Accomac Co., Va., December 23d, 1856: I tried De Burg alongside of No. 1 Peruvian Guano last spring, on Irish Potatoes, Sweet Potatoes and Garden Vegetables, and did not see any perceptible difference in the product of either. I also used De Burg on Corn in the hill—the result was satisfactory.

John D. Tyler, Esq., Anancock, Va., December 27, 1856, says: I like De Burg so far as I have tried it, and think it brings a pretty good return for the cost; by estimation I applied about 150 pounds to the acre, and from it the Corn grew finely, and matured well—hardly unlike that immediately by side treated in the usual way with No. 1 Peruvian Guano. I am inclined to prefer it to the Guano for more than the difference in cost.

John Hamilton, Esq., Port Tobacco, Charles Co., Md., January 5th, 1857, says: I used De Burg and No. 1 Peruvian Guano on land seeded in Wheat, in the fall of 1855. The Wheat was decidedly better where the De Burg was applied; also the young Clover was better on the same land. I used De Burg on a portion of my last Corn crop, both on light and stiff soils, it acted finely, producing a very heavy crop on comparatively thin land, a hand full to the hill was applied, covered with the corn. The Corn grew finely and was not affected by the drought, but preserved a healthy color during the season. I have not used Peruvian Guano on Corn for several years, having failed in every trial made with it. I consider De Burg equal to Peruvian Guano for Tobacco plants, and superior to it for maturing the crop—keeping it in a healthy state, and preventing its firing or suffering from drought. As a Fertilizer, I consider it in every respect superior to Guano.

Jacob Lantz, Esq., Magnolia, Harford County, Md. says, January 10, 1857: I applied "De Burg" latter part of March,

1856, as a Top dressing to my Wheat, at the rate of 100 lbs. per acre, and the effect was very perceptible in a few days, and at harvest increasing the length of the heads more than one inch, over the balance of the field where I used Peruvian Guano at seeding.

I applied it to my Oats at the rate of 200 pounds per acre, and the yield was much greater than ever before from No. 1 Peruvian Guano—yielding 55 bushels per acre on land that would not have produced 20 bushels without it.

To my Corn I applied it at the rate of a hand full to two hills at planting, and although an unfavorable season, I had more Corn by 20 bushels than I ever had before from the same land in a favorable season, by the use of No. 1 Peruvian Guano—costing twice as much per acre for the application. I also applied it as a Top dressing to my Clover, and the effect was really astonishing from the application of 100 pounds per acre, it caused a most luxuriant growth of Clover.

De Burg is not affected by the drought, but continues pushing the plants forward all the time. I consider it superior to Peruvian Guano at same cost.

TAKE NOTICE—It is only "De Burg's Super Phosphate of Lime," that produces the above results, as it contains more fertilizing properties than any Guano, or combination of Guanos or other chemical manures known. As a proof of which the quantity and quality of grain produced, the subsequent benefit to the soil, and greatly increased demand, which is beyond all precedent in artificial manures. In consequence of which, many imitations are put upon the market, and palmed off for the genuine. Farmers should therefore be particular, and buy none but "De Burg's No. 1 Ammoniated Super Phosphate of Lime," which is in *Barrels with white heads*, and the manufacturer's name, *in Black Letters*, stencilled thereon. To secure which call on or address,

J. J & F. TURNER,
feb 1 *42 Pratt Street, Baltimore.*

DE BURG'S No. 1
MANIPULATED
GUANO.

We intend keeping on hand a full supply of the above, composed of Peruvian and Phosphatic Guanos, warranted of uniform quality.

Every lot is subjected to the inspection of Dr. David Stewart, Chemist to Maryland State Agricultural Society, which is a protection to the Farmer and a guarantee of its quality, and will be found upon examination, superior, as the analysis proves, to any heretofore sold in this market. Mr. De Burg's facilities and machinery for uniform manipulation, are superior to any other in this country.

(*Analysis of De Burg's No. 1 Manipulated Guano:*)

Salts of Ammonia,	30.31
Mixed Phosphates,	46.76
Sand or Insoluble Portion,	2.38
Carbonates & other elements	7.15
Water or Loss,	13.40
	100.

9.65 per cent. of Pure Ammonia.
46.76 per cent. of Phosphates.

DAVID STEWART, M. D.
Chemist of Md. State Agricultural Society.

"PRICE, $48 per 2,000 pounds in Bags."

GUANOS, &c. SEEDS, &c.

Peruvian, African, Mexican, Colombian, Fish, and Manipulated Guanos. De Burg's No. 1 Ammoniated Super Phosphate. Fine and coarse Ground Bones, Poudrette, &c.

Also, Clover, Timothy, Millet, Orchard, and Herds Grass Seeds, selected with great care, and of superior quality—to all of which we call the attention of the Agriculturists of the South.

Those at a distance can have their orders filled, as if here, at the lowest rates, by addressing

J. J. & F. TURNER,
feb 1 *42 Pratt St., Baltimore.*

NEARLY READY WITH SUGAR CANE SEED GRATIS.

CHINESE SUGAR CANE,

AND

SUGAR MAKING.

ITS HISTORY, CULTURE AND ADAPTATION TO THE SOIL, CLIMATE, AND ECONOMY OF THE UNITED STATES,

With an account of various processes of Manufacturing

SUGAR.

Drawn from Authentic Sources,

BY CHARLES F. STANSBURY, A. M.,

Late Commissioner at the Exhibition of the Industry of all Nations, at London.

PRICE TWENTY-FIVE CENTS.

Published by C. M. SAXTON & CO., 140 Fulton-street, New York.

N. B.—To persons enclosing 25 cents and a *three-cent P. O. stamp*, to us, we will send the above book and *Seed enough* TO PLANT TWO RODS SQUARE.

C. M. SAXTON & CO.,
feb 1-1t. No. 140 FULTON STREET, NEW YORK.

CHINESE POTATO, IMPERIAL WHITE,

THE same as exhibited by us at the Crystal Palace Fair, ours being the only ones of American growth—$20 for 100, $5 for 20, $3 for 12. Imported tubers and root cuttings, of uncertain varieties, not guaranteed, $65 per 1000, $7 per 100, $4 for 50, $2 for 25, with full treatise on Culture. Orders for $5 or under, cash; larger orders one-third cash and balance on delivery in the spring by Express. Chinese Sugar Cane Seed—packages of fresh seed for one-half acre, $1, with directions. Earth Almond, $1 per 100. Licorice—$10 per 100, $3 per dozen. Osier scions—$2 to $5 per 1000. Lawton Blackberry—$25 per 100, $4 per dozen. Victoria and Linnæus Rhubarb—$9 per 100. Madder—$10 per 100. Giant Asparagus, $4 to $6 per 1000. Japan Pea, Osage Orange, Yellow and Honey Locust Seeds, Apple, Pear, Plum, Angers Quince, and other Fruit Seeds. Sweet German Turnip, King Philip Corn, Christiana Melon, Orange Water Melon, with a most extensive collection of Vegetable, Flower, Agricultural, Tree and Shrub seeds in the Union, *all warranted*.

N. B.—Priced Catalogues of Trees, Plants and Seeds will be sent to applicants. WM. R. PRINCE & CO.
feb. 1-1t. **Flushing, N. Y.**

THE CO-PARTNERSHIP heretofore existing between CHARLES RICE and THOMAS NORRIS, under the firm of Rice & Norris, was dissolved by the death of Charles Rice, on the 25th day of August last. The business of the late firm will be settled by Thomas Norris, (the surviving partner) who continues the AGRICULTURAL IMPLEMENT, MACHINE AND SEED BUSINESS as heretofore, on his own account at the old stand. He respectfully solicits a continuation of the patronage of his friends and customers. THOMAS NORRIS,
feb 1-1t. 48 Light street, Baltimore.

CUMMINGS' CELEBRATED

STRAW, FODDER AND STALK CUTTER,

BY HAND OR HORSE-POWER.

PERSONS in want of the very best Cutter in use, would do well to call at 48 Light street, and see something that is *warranted* to give the most perfect satisfaction.
Price $33 cash. THOMAS NORRIS,
feb 1-2t. **48 Light street, Baltimore.**

VALUABLE VIRGINIA FARM

FOR SALE—Situated in *Gloucester County, at the mouth of Ware River, in full view of the Mob Jack and Chesapeake Bays.* It contains **283 Acres.** About 180 acres cleared arable land, in fine heart, and well adapted to Wheat, Corn, Oats and the Grasses. Vessels can lie within 100 yards of the shore. Buildings are all new, substantial and commodious. Fish, Oysters and Wild Fowl abound, and Seine hauling would be found profitable. Physicians consider the location very healthy, and the neighborhood and society unsurpassed, with places of Worship convenient, and Steamers for Norfolk and Baltimore twice a week.

Further particulars can be had on application to the Editors American Farmer, or on the premises to
JOHN P. TALIAFERRO.
☞Letters addressed to Gloucester C. H., Va., will be promptly attended to. feb 1-tf